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THE UNIVERSITY OF ALBERTA

THE GOALS OF UNIVERSITIES IN PAPUA NEW GUINEA

BY

© JOHN MARK SOLON

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND
RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA

SPRING, 1990

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J. Dennison. External Examiner

Date: 10th January 1990

DEDICATION

This thesis is dedicated to my mother Rosalind Yasko (Droleu), my father Paul Droke-en, my partner Elizabeth, and my children, Alice, Alexander, Michaela and Patricia.

ABSTRACT

The primary purpose of this study was to identify and compare goal perceptions of writers, administrators and academics in two universities in Papua New Guinea (PNG). Three methods -- a survey based on the Institutional Goal Inventory (IGI), document study, and focussed interview -- were used to gather data. Questionnaire data were analyzed using descriptive and inferential statistical methods while document and interview data were subjected to content and item analysis.

The findings indicated that respondents perceived most IGI and specific local goals to be appropriate for universities in PNG. Academic development, intellectual orientation, community, accountability/efficiency, advanced training, vocational preparation, intellectual/ aesthetic environment and democratic governance were among the highest rated goals.

Similarly training of national staff for Papua New Guinea universities; cooperation with Commission for Higher Education in planning higher education in Papua New Guinea; promotion of language, mathematics and library skills of university students and establishment of a single salary and improved working condition for university staff; were among the highest rated local specific goals.

Significant differences were evident between the respondents' actual and preferred ratings. Respondents' "preferred" ratings for 20 IGI goals and 10 local specific goals were higher than the "actual."

Differences were also evident in the goal ratings of administrators and academics, and in the ratings of respondents at the University of Papua New Guinea and the Papua New Guinea University of Technology. Administrators generally had higher goal ratings than did academics. Respondents at the Papua New Guinea University of Technology rated the following actual goal: vocational preparation; advanced training; and meeting local needs; of higher importance than did respondents at the University of Papua New Guinea. Respondents at the University of Papua New Guinea rated freedom, and democratic governance and social criticism/activism of higher importance than did respondents at the University of Technology.

Respondents at the University of Papua New Guinea rated the following preferred goals: academic development; intellectual orientation, humanism/altruism; cultural aesthetic awareness; research, public service, social criticism/activism; freedom and intellectual aesthetic environment of higher importance than did respondents at the Papua New Guinea University of Technology.

On the same note, the University of Papua New Guinea respondents' actual ratings of provision of in-service education and training for teachers/instructors; establishment of a single salary/working condition for university staff; and promotion of Papua New Guinea's cultural practices were higher than the Papua New Guinea University of Technology respondents. The latter rated adaptation of teaching methods to Papua New Guinean learning styles; encouragement of Papua New Guinean women to obtain university education; and development of joint-university programs; of higher importance at their university.

Diverse socio-cultural practices, inadequate finance, public misunderstanding of the universities' goals, and inadequate educational curricula were identified as problems inhibiting goal achievement. Revision of socio-cultural practices, improved financial assistance to universities, revision of educational structures and programs, and improved communications between the parties were among the recommendations to advance the goals of Papua New Guinea universities.

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This study could not have reached its conclusion without the advice and assistance of many persons and institutions. The writer expresses his gratitude to all who have supported the development of this study.

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TABLE OF CONTENTS

CHAPTER PAGE

1 INTRODUCTION 1

Purposes of the Study 3

Significance of the Study 3

Limitations and Delimitations 5

Organizations of the Thesis 5

2 THE PAPUA NEW GUINEA CONTEXT 7

Political Developments 7

Political Education and Participation 8

Self-Government and Independence 9

Economic Developments 13

Education 14

Basic Education 16

Secondary Education 16

Higher Education 17

Universities of PNG 18

Foundations for University Development 18

Establishment of Universities in PNG 21

Summary 23

3 RELATED LITERATURE 25

Organizational Goals 25

Definition 25

Functions 26

Problems 26

Determining Organizational Goals 28

Setting Organizational Goals 30

Effectiveness and Efficiency 31

Goals and Conflict in Universities 33

Institutional Goals Studies.. 38

Institutional Goals Inventory (IGI).................. 38

Other Goal-Related Studies.......................... 42

Summary 46

4 DESIGN AND METHODOLOGY.................................... 48

Conceptual Framework 48

Instrumentation.. 49

Questionnaire Survey.................................. 50

Interview.. 52

Documentary Survey 54

Validity and Reliability.. 55

Data Analysis 55

Survey Questionnaire...................................... 55

Documents.. 56

Interviews.. 56

Summary.. 57

5 RESPONSES TO IGI SURVEY....................................... 59

Plan of Analysis.. 59

Goals for PNG Universities.................................... 61

All Respondents.. 65

Administrators and Academics.......................... 66

Goals for UPNG 69

All Respondents 72

Administrators and Academics 73

Goals for PNGUT 76

All Respondents 79

Administrators and Academics 80

Comparison of UPNG and PNGUT Goals 83

Summary 87

6 LOCAL SPECIFIC GOALS 90

Plan of Analysis 90

Local Specific Goals for PNG Universities 91

All Respondents 91

Administrators and Academics 95

Local Specific Goals for UPNG 99

All Respondents 103

Administrators and Academics 103

Local Specific Goals for PNGUT 107

All Respondents 111

Administrators and Academics 112

Comparison of UPNG with PNGUT 116

Summary 120

7 DOCUMENTED GOALS OF UNIVERSITIES IN PNG 126

Documents Published in the 1960s 127

Commission on Higher Education in PNG 1964 Report 127

Documents Published in the 1970s.......................... 129
    Committee of Inquiry into Higher Education
        Report.. 129
    Committee of Enquiry into University Development
        Report.. 132
    PNG Journal of Social Science and Humanities..... 137
    PNGUT Annual Reports and Financial Statements.. 147
Documents Published in the 1980s.......................... 149
    The University of Technology Act 1980.............. 149
    Educational Roles of UPNG 1980 152
    UPNG Legislation 1983 155
    Working Party on University Priorities, Staffing and
        National Resources 1983...................... 158
    Papua New Guinea Constitution 1984 160
    Higher Education: Issues and Options 1984 163
    UPNG Calendar 1984-85 165
    UPNG Medium Term Development Plan 1984-198..167
    Higher Education Plan: A Strategy for Rationalisation
        1986 - 1990.................................... 169
    Advisory Technical Assistance Study on Higher
        Education 1987................................ 171
Summary 172
8 GOAL ELABORATION 176
Goal Priorities.. 176
    Goal Ranking Distribution............................ 176

Interpretations, Problems and Recommendations............ 179

Interpretations.. 189

Problems.. 189

Recommendations....................................... 189

Goal Integration...................................... 189

Summary 192

9 SUMMARY, DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS..................... 194

Summary.. 194

Purposes and Procedures............................... 195

Goals for PNG Universities........................ 196

Discussion... 202

Recommendations.. 206

Theory.. 206

Research 207

Practice 207

General Conclusion....................................... 208

BIBLIOGRAPHY 210

APPENDIX A. IGI Questionnaire Survey...................... 225

APPENDIX B. List of Interviewees......................... 241

APPENDIX C. IGI Construct Validity Procedures.............. 245

APPENDIX D. Priorities for Development of UPNG 1984-89............ 248

APPENDIX E. Interview Guide............................... 252

APPENDIX F. Related Correspondence........................ 258

LIST OF TABLES

TABLE PAGE

4.1 Questionnaire Distribution and Return 52

5.1 Actual and Preferred Goal Ratings for PNG Universities 63

5.2 Actual and Preferred Goals rankings for PNG Universities 64

5.3 Top and Bottom Actual Goals for PNG 65

5.4 Top and Bottom Actual Goals for Administrators and Academics at PNG 67

5.5 Top and Bottom Preferred Goals for Administrators and Academics at PNG 68

5.6 Actual and Preferred Goal Ratings for UPNG 70

5.7 Actual and Preferred Goal Rankings for UPNG 71

5.8 Top and Bottom Actual and Preferred Goals for UPNG 72

5.9 Top and Bottom Actual Goals of Administrators and Academics at UPNG 74

5.10 Top and Bottom Preferred Goals of Administrators and Academics at UPNG 75

5.11 Actual and Preferred Goal Ratings for PNGUT 77

5.12 Actual and Preferred Goal Rankings for PNGUT 78

5.13 Top and Bottom Actual and Preferred Goals for PNGUT 79

5.14 Top and Bottom Actual Goals for Administrators and Academics at PNGUT 81

5.15 Top and Bottom Preferred Goals for Administrators and Academics at PNGUT 82

5.16 Top and Bottom Actual Goals of UPNG and PNGUT 84

5.17 Top and Bottom Preferred Goals of UPNG and PNGUT............ 85

6.1 Actual and Preferred Ratings of Local Specific Goals for PNG Universities.. 92

6.2 Actual and Preferred Rankings of Local Specific Goals for PNG Universities.. 93

6.3 Top and Bottom Actual and Preferred Local Specific Goals for PNG Universities... 94

6.4 Top and Bottom Actual Goals of Administrators and Academics in PNG Universities... 96

6.5 Top and Bottom Preferred Goals of Administrators and Academics in PNG Universities... 98

6.6 Actual and Preferred Ratings of Local Specific Goals for UPNG... 100

6.7 Actual and Preferred Rankings of Local Specific Goals for UPNG. 107

6.8 Top and Bottom Actual and Preferred Local Specific Goals for UPNG.. 102

6.9 Top and Bottom Actual Local Specific Goals for Administrators and Academics at UPNG....................................... 104

6.10 Top and Bottom Preferred Local Specific Goals for Administrators and Academics at UPNG....................................... 106

6.11 Actual and Preferred Ratings of Local Specific Goals for PNGUT.. 108

6.12 Actual and Preferred rankings of Local Specific Goals for PNGUT.. 109

6.13 Top and Bottom Actual and Preferred Local Specific Goals for PNGUT.. 110

6.14 Top and Bottom Actual Local Specific Goals for Administrators at PNGUT.. 113

6.15 Top and Bottom Preferred Local Specific Goals for Administrators and Academics at PNGUT 115
6.16 Top and Bottom Actual Goals for UPNG and PNGUT 118
6.17 Top and bottom Preferred Goals for UPNG and PNGUT 119
7.1 Goal Excerpts-- Commission on Higher Education in Papua New Guinea 1964 128
7.2 Goal Excerpts -- Committee of Inquiry into Higher Education in PNG 1971 131
7.3 Goal Excerpts -- Committee of Inquiry into University Development in PNG 1974 133
7.4 Goal Excerpts -- Yagl- Ambu 138
7.5 Goals Excerpts -- Annual Reports and Financial Statements of PNGUT 1976 - 79 148
7.6 Goal Excerpts -- PNGUT Act 1980 151
7.7 Goal Excerpts -- Educational Roles of UPNG 1980 153
7.8 Goal Excerpts --UPNG Act and Statutes 1983 157
7.9 Goal Excerpts -- Joint Working Party on University Priorities Staffing and National Resources 1983 159
7.10 Goal Excerpts -- PNG Constitution 1984 161
7.11 Goal Excepts -- Higher Education: Issues and Options 1984 164
7.12 Goal Excerpts -- UPNG Calendar 1984 - 85 166
7.13 Goal Excerpts -- UPNG Medium Term Plans 1984 - 89 168
7.14 Goal Excerpts -- Higher Education Plan: A Strategy for Rationalisation 1987 170
7.15 Summary of University Goals Cited in the Documents 173
8.1 Distribution of Interviewees' First Five Goal Preferences 178

8.2 Respondents' Comments on Goal: Intellectual Orientation 180
8.3 Respondents' Comments on Goal: Academic Development 181
8.4 Respondents' Comments on Goal: Individual Personal Development.. 182
8.5 Respondents' Comments on Goal: Vocational Preparation.......... 183
8.6 Respondents' Comments on Goal: Public Service.................... 184
8.7 Respondents' Comments on Goal: Research............................ 185
8.8 Respondents' Comments on Goal: Community......................... 186
8.9 Respondents' Comments on Goal: Advanced Training.............. 187
8.10 Respondents' Comments on Goal: Social Criticism / Activism...... 188
8.11 Common Interpretations, Problems and Recommendations Related to IGI Goals 190

LIST OF FIGURES

FIGURE PAGE

4.0 Conceptual Framework.. 49

5.1 Plan for Analysis of Data in Chapters 5 and 6.................... 60

CHAPTER 1

INTRODUCTION

Papua New Guinea (PNG) has two universities. The University of Papua New Guinea (UPNG) and the Papua New Guinea University of Technology (PNGUT) were established in the 1960s to educate and prepare the people for self-government and independence. More specifically the universities were charged with training an indigenous elite that would assume administrative and technical functions of government previously performed by Australian personnel. The universities responded with ambitious programs of teaching, research and technical training which helped PNG to successfully achieve independence in 1975.

The achievement of independence, deteriorating economic conditions and the universities' quest for autonomy and intellectual freedom created uncertainties and conflicts among indigenous leaders and the public about the functions of universities in the country. Evidence of this conflict can be observed in the views of the country's two prominent political leaders. In discussing the role of UPNG, Prime Minister, Mr. Michael Somare (1976) cited high-level manpower training, research into national problems and issues, and acting as social-conscience of the nation by being a critic of its government as primary functions of a university. The "father" of PNG's constitution, Reverend John Momis (1976), however, questioned the university's role of producing high-level manpower and argued that its proper role "is to equip people with the necessary intellectual perception to identify the real needs and aspirations of the people" and added that "the people of Papua New Guinea expect the university to give them a vision of the future" (p. 189).

Another popular opinion was that universities should continue to educate an elite group for national leadership and other professional functions of government, but opponents (Addison, 1981) argued that this would weaken the fabric of PNG's egalitarian society .

The dilemma is compounded by the country's continuing changes in political, social and economic conditions. Politically, the introduction of a decentralized system of government after independence has created additional demands for highly educated leaders and bureaucrats. Socially, through formal education, PNG traditions are being compromised by the introduction of western values and lifestyles. For example, traditional kinship ties are being replaced by competitive and individualistic attitudes. Economically, diminishing amounts of Australian financial aid, the world financial crisis and low export prices are forcing the government to cut expenditures on basic services such as health and education.

These changes have forced the government and the public to question the functions of the universities. Consequently, universities are challenged to re-examine their goals and establish priorities to match dwindling resources. Should universities emphasize the same goals they had twenty years ago? Do changes in the nation's conditions warrant new goals and programs? Meek (1982) suggested that the universities, like the nation itself, are entering an age of uncertainty:

> UPNG is an institution sponsored by a colonial power and built by expatriates. The "mission" to be achieved by the foundation of the university in PNG was well defined by those involved. However, with the accomplishment of the original mission, and with the dramatic change in the institution's exogenous environment, the nature of the task of adapting the university to a social context which its members help to create is less clear. The character of the institution and the social values of its members have a different significance today than they had some ten years ago.(p. 49)

The literature questions universities' effectiveness and suggests a re-definition of their goals. Surveys of the literature on university education in PNG reveal that little research has been conducted to guide university administrators, educational planners and policy makers.

Purposes of the Study

The significance of goal-related information for national and institutional policies and decision-making for universities prompted the researcher to plan a study that would examine existing literature for direct and indirect references to university goals as well as perceptions of administrators and academics concerning their universities.

To address these purposes, the following research questions were articulated:

1. What are the goals of PNG universities as described in the literature?
2. What are the perceived goals (actual and preferred) of the PNG university system?
3. What are the perceived goals of each university?
4. What are the differences (if any) between goal perceptions of academics and administrators?
5. What are the differences (if any) between goal perceptions of UPNG and PNGUT respondents?
6. What problems inhibit goal achievement?
7. What strategies might advance these goals?

Significance of the Study

The importance of clear goals to the universities, other higher education institutions, and policy makers cannot be over-emphasized. As observed by Cornish (1977), the subject of goals is "one of the most pervasive issues in organization theory" and "has become a critical problem in the daily reality of organizational operations particularly in institutions of higher education" (p. 1). Uhl (1971) described the implications of goals for higher education institutions in the United States in the 1970s as follows:

> During the past five years, colleges and universities have experienced a crisis of authority and confidence both on and off campus, Radicals view colleges and universities as tools for forging a new society, while conservatives see them as instruments for sustaining and strengthening the status quo. Politicians and taxpayers generally view higher education as being unable to manage its own affairs. The intensity with which the colleges and universities are being pulled by these different groups not only stresses the importance of what the groups want but also indicates the importance of finding a means to promote convergence of opinion among them with respect to institutions. (p. x)

While this condition was evident in the United States more than a decade ago, it reflects the crisis in PNG in the 1980s. The political, social and economic conditions in PNG have been changing dramatically during the last 25 years; universities, however, are evolving at a slower pace. University administrators and policy makers are constantly challenged to establish appropriate programs and priorities and keep abreast with the changes. Indeed, as observed by the Joint Working Party on University Priorities Staffing and National Resources in PNG (Rogers et al., 1984), "the question of academic programme priorities has now become an important and potentially divisive issue at many institutions facing the reality of having to consolidate a broad array of offerings or eliminate selected programmes" (p. 15). This challenge will be impossible if institutions are unclear of their purposes and goals.

While emphasis has been placed on the importance of goals in institutional planning and decision making elsewhere (Cornish, 1977; Etzioni, 1964; Gross, 1969; Gross and Grambsch, 1974; Uhl, 1971), no study of this nature has been conducted on universities in PNG. This research is consequently of great significance to universities, the Ministry of Education and the government for future planning and developments. It will generate basic information for decision making at several levels and will contribute to the nation's database on university goals and effectiveness. Finally, the study will provide cross-cultural researchers with information about the use of the Institutional Goals Inventory (IGI) instrument in a specific cultural setting, other than the one for which the instrument was designed.

Limitations and Delimitations of the Study

One major limitation of the study is its use of a numerically small sample of respondents, as opposed to the traditionally large survey samples obtained for other university and higher education institution studies (Gross and Grambsch, 1974). Furthermore, the study is dependent on individual interpretations by administrators and faculty members in the universities. Time constraints made it impractical to include other members of the universities' population (students and support staff) in the survey.

While this study has potential for research into the higher education sector in the country, it is limited to the survey perceptions, documentary evidence and oral opinions of academic staff, administrators and writers. Consequently conclusions of the study are limited to the universities of PNG.

Organization of the Thesis

The thesis comprises nine chapters. Chapter 1 provides the introduction to the study. The purposes, subproblems, significance and organization of the study are discussed in this chapter.

Chapter 2 describes the political, social, economic and educational context of the study, including an account of the principles underlying university development in PNG.

Related literature is described in chapter 3. Discussion includes the nature of goals, their definitions, identification and organizational significance. The chapter presents further discussions on university functions of teaching, research, public service and democratic community and highlights conflicting demands and influences these functions have had on traditional and modern university structures. Finally, the development of the IGI and results of goal related research are discussed.

The analytical framework, instrumentation, data gathering and analytical procedures for this study are explained in chapter 4.

Chapters 5, 6, 7 and 8, contain basic data for this study. This includes summaries of statistical interpretations of questionnaires, content analysis of documents and interviews. Chapter 5 presents the survey results of the Institutional Goals Inventory (IGI). Results of ten local specific goals (goals statements which address PNG university issues) are discussed in chapter 6. Data deduced from study of goal-related documents on PNG universities are discussed in chapter 7. Chapter 8 discusses data obtained by interviews.

Finally, chapter 9 presents the summary, conclusions and implications of the study.

CHAPTER 2

THE PAPUA NEW GUINEA CONTEXT

Descriptions of PNG's early contact with western powers and its political, economic and educational developments are presented in this chapter. While the focus of the study is on university goals, political, social, economic and educational needs influenced the development of the nation's universities. Indeed, PNG's two universities were planned and established in response to particular needs of the country.

Political Developments

The existence of "the black people of Papua" (Nelson, 1982, p. 10) was reported by European traders in the Dutch East Indies in the fourteenth century, but Europeans knew little about the land and its people until the late 1800s. European explorers sighted and charted PNG's many islands from 1528 to 1793. By the late 1800s sufficient knowledge had been gained to interest two western powers, Germany and Great Britain, in what these islands had to offer.

PNG was administered as two Territories -- Papua and New Guinea-- in the late nineteenth century by Britain and Germany respectively. Papua was claimed by Britain as a protectorate in 1884 and became a crown colony in 1888. During 1888-1898, Britain shared administrative responsibilities with Queensland, following Queensland's attempt to annex Papua from Britain. In 1902 an Imperial Order in Council placed Papua under Australian control. The Order became effective when the Papua Act was proclaimed in 1905 (Cleverly, Wescombe, 1979).

New Guinea was claimed by Germany in 1884 and remained a German colony until

1914. During World War I, Australian troops occupied and controlled German New Guinea. Military administration of the colony continued until 1920 when Australia accepted a mandate from the League of Nations to administer the colony as a Trust Territory.

From 1942 to 1945 the Territories were administered as a single entity by the Australia New Guinea Administrative Unit (A.N.G.A.U.) under the Australian Department of the Army and the Department for External Territories. In 1949 the Australian Government passed the Papua New Guinea Provisional Act and established a permanent civil administrative unit. Although the Territory was administered as a single entity, Papua retained its status as a colony and New Guinea remained a mandated territory of the United Nations. In 1971 the Australian Government passed the National Identity Act which provided for joint self-government. The territories became politically united as Papua New Guinea, and on September 16, 1975 Papua New Guinea assumed political independence from Australia.

Political Education and Participation

Political education and participation of Papua New Guineans from 1905 to 1960 was slow and indifferent (Nelson, 1974; Stephen, 1972). The country's rugged terrain and the existence of over 700 small but independent tribes and cultures provided sufficient reasons for the colonial administration to believe that any form of indigenous self-government would be impractical. Some administrators assumed that Australia would continue to administer the Territory into the twentieth century and therefore saw no urgent need for political education of the natives. Others, however, emphasized the need for carefully supervised and spontaneous growth of village and local governments.

The establishment of village and local governments in the late 1950s was ineffective. Colonial officials observed them more as structures to communicate government policies than as local legislative bodies. Most indigenous groups viewed these institutions as suppressive instruments created by the colonial government to undermine their socio-political practices, and consequently they ceased to support them.

Self-Government and Independence

The quest for political independence by dependencies in Africa and South East Asia in the 1950s, pressure from the United Nations and Australian opposition parties, were reasons for PNG's rapid political development in the 1960s and 1970s. The struggle by Indonesian nationalists to achieve self-government and independence from the Dutch in the East Indies and West New Guinea inspired some indigenous groups to seek self-government. Various United Nations' missions to PNG in the early 1960s urged the Legislative Committee to allow more Papua New Guinean representation in the Legislative Council which advised the Australian Government on Papua New Guinean affairs. The government's opposition in Australia warned that PNG would not be immune to the political changes occurring in Africa and South East Asia and urged that affirmative action be taken to prepare a group of Papua New Guineans to take responsibility for their people. Consequently the Legislative Council was abolished in 1963 and replaced by the House of Assembly in 1964, to which a specified number of indigenous members were elected.

The establishment of the first House of Assembly represented a turning point in PNG's political history (Stephen 1972, p. 56). It was the first time in the country's history that the Legislature had an indigenous majority elected from a common roll. The number of indigenous elected representatives increased, while official and appointed representatives decreased in subsequent elections. For example, the number of open seats (members representing a single political constituency) nearly doubled, from 44 in 1964 election to 82 in the 1972. Similarly, regional seats (elected members representing two or more open electorates) were increased from 15 to 18, while official seats (members appointed by the administrator) were reduced from 10 to four.

Despite this progress, problems plagued the House and its indigenous members. Lack of education, political experience, language barriers, and regional differences divided indigenous members and prevented them from speaking with a united voice. For example, many members were elected to the house for reasons other than education or political experience. Most members were illiterate; some could not speak a language other than their own dialect. Nelson (1974) cites the following personal profile of an elected member to illustrate these problems.

> I was old enough to remember the first Australian who came into my area. I am not an educated man. When I was young there was no school in my area. I do not even speak pidgin (a local Lingua Franca) very well. . . . I am just a simple man but I was elected to the House and have learnt a little. (p. 135)

Nevertheless, by 1970 a number of Papua New Guinean elected representatives were actively promoting self-government and independence. Their activities led to the foundation of the Papua and New Guinea Unity (PANGU) party. Under the leadership of Mr. Somare (a primary school teacher), the PANGU party members urged that self-determination for their nation become the primary goal of every member in the House. To realize this goal, the PANGU party presented to the House of Assembly eight statements of aims as the basis for planning for self-government and independence.

The eight statements sought to promote:

> (1) an increase in the proportion of the economy under the control of Papua New Guinean individuals and groups and in the proportion of personal and property income that goes to Papua New Guineans;
> (2) more equal distribution of economic benefits, including movement towards equalization of income among people, and towards equalization of services among different areas of the country;
> (3) decentralization of economic activities, planning, and government spending, with emphasis on agricultural development, village industries, better internal trade and more spending channelled to local and area bodies;

> (4) an emphasis on small-scale artisan, service and business activity, relying, where possible, on typically Papua New Guinean forms of business principles;
>
> (5) a more self-reliant economy, less dependent on imported goods and services and better able to meet the needs of its people through local production;
>
> (6) an increasing capacity for meeting government spending needs from locally raised revenue;
>
> (7) a rapid increase in equal and active participation of women in all forms of economic and social activities; and
>
> (8) government control and involvement in those sectors of the economy where it is necessary to achieve the desired development. (Strategies for Nationhood, 1974, pp.16-17)

The eight-point plan was an important step towards independence, but there were some reservations. Critics argued that "they could be quoted in support of almost any proposal; and they did not provide an all-embracing ideological framework" (Lynch ,1981, p. 31). Nonetheless, they became political symbols of the indigenous government and its determination to unite people of diverse cultural, social, political and educational character.

The call from elected indigenous members in the House of Assembly for self-determination, external pressure from United Nation's visiting teams in the 1960s and early 1970s on the Australian government to prepare for self-government for the Territory, and strong criticism from opposition parties in Australia encouraged the colonial government to change its stance. Australia mounted intensive training programs for all sectors of the administration with the aim of granting self-government and independence by the mid- or late-1970s. The programs included guidelines for government departments in the Territory to train and prepare Papua New Guineans to assume administrative and technical responsibilities in their departments, and advice to the House of Assembly to establish a Constitutional Planning Committee to develop and review constitutional guidelines for

PNG. The programs progressed quickly and with much success so that by September 16, 1975, the House of Assembly received and approved the following national goals asp part of the preamble to the constitution:

> 1. Integral Human Development. This goal calls for every Papua New Guinean to be dynamically involved in the process of freeing himself or herself from every form of domination or oppression so that each person will have the opportunity to develop as a whole person in relationship with others.
>
> 2. Equality and Participation. This goal declares that all citizens of the country have equal opportunity to participate in and benefit from the development of the country.
>
> 3. National Sovereignty and Self-Reliance. This goal exalts the vision of the people to be politically and economically independent and to work towards an economy that is basically self-reliant.
>
> 4. Natural Resources and Environment. This goal calls for utilization of the nation's resources for the benefit of all and to protect as well as replenish it for the benefit of future generations.
>
> 5. Papua New Guinean Ways. This goal aims to encourage the use of Papua New Guinean forms of social, political and economic organizations in the development of the people. (PNG Constitution, 1984, pp. 2-5)

The acceptance of the Constitution symbolized the nation's transition to political independence.

The current political context in PNG can be described as steady but full of tensions. Most of its leaders are young and inexperienced. Few have clear visions about the future of the country . Many see their positions as opportunities to accumulate wealth. The country remains dependent on foreign advice, capital and technical skills.

Economic Development

The government's economic development strategy has been to develop a strong formal sector with emphasis on export-oriented products both in the field of agriculture and mineral resources such as copper and gold. The ultimate objective of the government is to create fiscal self-sufficiency and provide additional earnings to help improve the subsistence sector of the economy and basic social services in the rural areas. Nevertheless, PNG's economy has been supported by massive Australian subsidies amounting to about A$1,000 million over a 25 year period (Bacchus, 1985).

Papua New Guineans participate in two economic systems --subsistence and cash systems. Until the 1960s most Papua New Guineans were subsistence farmers undisturbed by wage rates and world commodity prices. Farmers cleared family-sized plots in lush tropical forests and cultivated crops such as bananas, cassava, taro, yams and a variety of fruits. Production was limited to the needs of the immediate and extended family. Excess produce was shared with needy members of the clan or traded with partners through complex traditional bartering systems (Malinowski, 1978).

Today the subsistence economy is dominant in PNG's rural communities but the government has encouraged the cash economy by providing government and modern business jobs. Exports of sugar, canned meat, gold, copper, tea, coffee, palm oil, and a vigorous program of mineral exploration have added confidence to the economy.

Several problems remain, among them are traditional land ownership and insufficient educated manpower to meet the demands of private investors who are interested in developing the nation's huge mineral resources. Land ownership is clan-based and is often a subject of many land claim disputes resulting in lengthy settlement processes and consequently limiting local and foreign investment initiatives.

Unmet demands by investors for educated manpower also reduce the nation's production capacities. In its Planning and Budgetary Strategy Document (1986) the government admits that "the capacity for effective investment of capital is dependent on adequately trained manpower, both technical and managerial," and "the shortage of these skills and the lack of organizational ability to deploy them to the best advantage is a major constraint to further economic growth" (p. 21). The government also acknowledges that training a national work-force for carrying out highly technical tasks involved in mining and industry involves long and expensive programs.

Education

Prior to the Second World War, general education in Papua New Guinea was nearly non-existent. There were a few church-run biblical schools which taught basic literacy skills including reading of the Scripture. The Australian government policy on education for this period favoured universal primary education and opposed the training of an elite group to lead their people. The policy provided little allowance for political education until the late 1960s and early 1970s. This policy was backed by certain ministers in the Australian Government Cabinet. Hastings (1969) suggested that the attitudes of the then Minister for External Territories, Mr. Paul Hasluck, contributed to the slow development of education in the Territory. "He innately distrusted the idea of training small numbers of specially qualified natives for the task of administering and governing the country. He preferred 'uniform development' -- a long period of universal education and emergence of grassroot politicians who would represent the 'real' feelings of their electorate" (p. 120). Hastings argued that Hasluck believed Australia would continue to administer PNG for a long time into the future and quoted Hasluck as saying, "For the next thirty years at the very least, a large part of the task of the administration of the Territory will be the establishment and maintenance of law and order among the people whose habits or whose memories are still closely tied with primitive savagery. . ." (p. 120). Hastings concluded:

> Mr. Hasluck (Minister for External Territories in the Australian Cabinet) felt

> that the result of this policy would be justified in the end by the growth of stable and representative political institutions. He preferred a broad primary school base so that the development of the country rests upon a wide distribution of education thus avoiding the creation of a narrow educated elite. (p.121)

It was only in the late 1940s and early 1950s that serious formal education initiatives were taken by the colonial administration (Smith, 1972). It drafted an Education Act for the Territory of Papua and New Guinea in 1945. The Act provided for joint responsibility by the churches and the government to provide education for the natives, and legislated financial provisions to church-operated schools which agreed to teach an approved government curriculum.

In sum, the education policy from 1875 until the late 1950s was one of gradualism. It emphasized universal primary education before the provision of secondary education. Subsequently tertiary education would be provided. However, the UN mission to PNG in 1961 questioned this policy and encouraged the Australian administration to review it. In its report the UN mission (1962) expressed concern that the Australian Government's education policies for the Territory did not

> a. provide for university education;
> b. produce individuals capable of replacing Australians in other than unskilled and semi-skilled positions;
> c. give a level of knowledge required to exercise responsibility in the fields of commerce and industry;
> d. make provisions for senior administrative and professional staff; and
> e. adequately generate political confidence and leadership. (UN Report, 1962, p.13)

The UN mission suggested that the colonial government give serious consideration to an education program that would prepare Papua New Guineans for self-determination and independence. Such recommendations left Australia with little option but to embark on an ambitious and highly imaginative education program in the 1960s. Policies for rapid development of secondary, technical and higher education were formulated. Similar developments of physical facilities for each of the sectors soon followed, so that by the late 1960s a significant number of children had been able to receive and complete secondary education and a small number were receiving university education.

Due to limited facilities, PNG education system is highly selective. In 1984 only 64% of the children between ages seven and 12 were able to receive some form of community school education. Currently 76% of school-age children have access to education. Selection to secondary education is based on academic achievement and is subject to quotas. Bacchus (1985) stated that if educational backgrounds of the age cohort reaching grade 11 in 1974 were traced back, it would be quite possible to prove that no more than 2% of the same cohort who entered primary schools were able to reach national high schools. Significantly fewer would have access to university education.

Basic Education

Three levels of formal education constitute the education system in PNG. The first level comprises basic education which is taught in the country's community (primary) schools. Children between the age of 7 and 12 attend this level for the first six years of their education. A selection-exam is used to identify the top 25% of students in each province to proceed to secondary level. The remaining 75% of students may continue their education by enrolling in provincial correspondence centers or vocational education centers, or they may return to their village communities.

Secondary Education

The second level comprises the secondary sector. This level provides a maximum of six years of education following primary education. It includes provincial high schools (grades 7-10), national high schools (grades 11-12), technical colleges (grades 9 and 10), and vocational education centers. Except for students in vocational centers, provincial high school and technical college students are screened bi-annually (at grades 8, 10 and 12) during their six years of secondary education. Students completing grade 8 can continue to higher grades, seek employment, attend technical colleges, return to their villages or enroll in correspondence education programs. Similarly, grade 10 students can take any of the mentioned options or proceed to national high schools (grades 11 and 12) or other tertiary institutions.

Higher Education

On completion of secondary education a student may proceed to the higher education level, which is comprised of many post-secondary professional training institutions. Programs include agricultural training, nursing, and primary teacher training. Professional training institutions offer two-year certificate and diploma programs which focus on specific trade or professional skills.

University education forms the pinnacle of the higher education sector in the country. Training at this level takes a minimum of two years for diplomas and four years for degree courses. The development of higher education in PNG began in the 1960s. Several external committees and missions were responsible for the type of higher education PNG currently enjoys. The UN mission (1962) urged that the policy of gradualism be replaced by an advanced system capable of educating people who could confidently meet the manpower needs of an independent state. Despite small student numbers the mission emphasized that Papua New Guineans should be given an opportunity to attend higher and university education. Consequently the Commission on Higher Education (Currie, Gunther and Spate,1964) and the Committee of Inquiry into Higher Education in Papua New Guinea (Brown, Cohen, and Eri, 1971) were established. Respectively, they were responsible for the establishment and review of university in particular and the total system in the country. The Commission on Higher Education (1964) in particular was established to inquire into and report on the means for developing higher education "to meet the prospective needs of the Territory and to serve the best interest of its people" (p. iv).

The Commission recommended and produced detailed plans for the establishment of a PNG university and an institute of higher technical education in Port Moresby. Other developments included establishment and consolidation of training institutions for teaching, nursing, agricultural and technical education. By 1970 more than 30 institutions had been established in the Territory and an estimated 3500 students had received some form of higher and university education.

In summarizing pre-independence higher education in the country, the Commission of Inquiry into Higher Education (1971) concluded:

> Apart from the two universities, higher education has developed in response to the felt needs of individual government departments, statutory bodies, churches or missions. Selections of locations often depended upon availability of land or existing facilities which could be put to use and which depended upon other activities of the parent department or organizations rather than other institutions of higher education. Institutions have thus tended to be regarded as integral parts of parent organizations rather than as coordinated parts of the overall structure of higher education.(p. 15)

Universities of PNG

Universities in PNG were established in response to the country's political developments in the 1960s and 1970s. The coming of self-government and independence to PNG meant that indigenous people had to be educated and trained to assume administrative responsibilities from their colonial counterparts. It was imperative that university education be available to Papua New Guineans.

Foundations for University Development

The foundations for university developments were set by the Commission on Higher Education (Currie et al.) in 1964. In discussing reasons for establishing a university in the Territory, the Commission reported:

> First and foremost is the political situation in the Territory in the next few

> years. It is vitally necessary to train indigenous cadres to take over in due time a wide range of functions, now carried on almost exclusively by expatriates, or initially to supplement expatriate positions. (p. 8)

Academic, social and cultural traditions, technical requirements, and the need to establish a balanced and integrated system of education in the Territory dominated the Currie Commission's university agenda. The Commission argued that planning and development of any university must seriously take account of these principles to ensure institutional success and goal achievement.

Academic and intellectual traditions. For lack of an existing tradition and fear of possible erosion of academic freedom and intellectual traditions by political leaders, the Currie Commission emphasized the need to deeply establish the traditions of university autonomy and academic freedom in the Territory. The Commissioners urged that these traditions be firmly established before any considerable transfer of political responsibility to an indigenous government. They feared it would be difficult for a basically indigenous government to grasp fully the rationale of a university and its role in society. Secondly, political interests within the Territory could too readily lead to a university becoming an issue of partisan politics. Members cautioned that if independence were granted before such an institution was firmly grounded its chanees of successful functioning would be greatly reduced. On the other hand they pointed out that "given time to build up a tradition of autonomy, academic freedom and useful service to the community a university could be one of the most powerful factors of unity imaginable" (Currie et al., 1964, p. 8).

Social and cultural traditions. Promotion of social and cultural traditions was another prime argument for establishing a university in PNG. The commissioners argued that an autonomous university would bring together students from diverse groups to a location where they can learn from one anothers' experiences. While emphasizing academic and intellectual freedom of universities, the Commissioners recognized PNG's traditions and emphasized that certain social, cultural and artistic practices should not be overlooked. Among the cited examples were: communal and kinship ties practiced by many tribal groups; the architectural designs of the Sepik "Haus Tambaran"; and intricate carvings of Tami and Trobriand islanders. The commissioners stressed that, while leading into new ways, university education should promote PNG's cultural values through teaching and research, and suggested that studies of Melanesian cultures and traditional societies be given particular attention in university programs (Currie et al., 1964, p. 9).

__Professional training.__ Much time and thought were devoted by the Commission to the technical requirements of the Territory. The Commission noted an under-development of professional education in PNG and recommended a system of block training to meet the practical need for agriculturalists, engineers, doctors, teachers and administrators. To give the status that it deserved the Commission recommended that higher level technical education should be associated with a university but argued, that "the real need is for a generalist engineer at diploma rather than degree level" (Currie et al., 1964, pp. 58-59). Ultimately the Commission recommended that diploma courses should be given in an Institute of Higher Technical Education.

__A balanced integrated education.__ The Commission drew attention to the importance of providing a balanced education in the Territory and argued that academic, intellectual and personal developments of Papua New Guineans were significant considerations for establishing a university in PNG. The Commissioners wanted to promote a university that would provide an education that cultivated in an individual, tastes, abilities and skills to enrich his or her personal life in society and at the same time train men and women in skills and techniques to fit them to work to promote economic growth and social development in their community. The Commissioners (Currie et al., 1964) cautioned:

> If due care is not taken to develop human resources by 'consumer' education, the development of 'investment' education may itself be

> impoverished by narrow specialization, and its application may take place in a vacuum, as it were, and therefore be ineffective or lead to serious social distortions, since the masses will not see the point of it and will remain unresponsive to desirable technical innovation. (p. 10)

Members of the Commission stressed that as part of an integrated education system a university's physical and academic structure should address the general and specific problems of the Territory.

> It is clear that the very unusual situation of Papua New Guinea demands considerable modifications of established academic methods; there is need for a new pattern adjusted to the local environment. . . . The need and the challenge are obvious indeed; and it is our conviction that the potential for achievement, though less obvious, is no less real. . . . There is immense cultural leeway to make up, and very real cultural obstacles to advance; the level of attainment in our modern terms, is as yet very low. But we have found nothing at all to suggest that there is anything inherent in the mental make-up of Papuans and New Guineans which would prevent them from grappling, successfully, with the great intellectual effort that they are called upon to make. (pp. 23-24)

Establishment of Universities in PNG

UPNG. The above considerations led the Commission to conclude that a fully autonomous university, offering basic academic education up to the first degree, should be established in PNG. Consequently, UPNG was established by the House of Assembly as a body corporate under the University of Papua New Guinea Ordinance of 1965.

An Interim Council membership and senior academic and administrative appointments soon followed. Academic planning and programs were based on the Commission's recommendations so that by 1966 the first student cohort was able to begin university programs. Four years later, six graduates convocated from the system.

PNGUT. The PNGUT was established in July 26, 1965 by Ordinance of the House of Assembly, originally under the title of Papua New Guinea Institute of Higher

Technical Education as recommended by the Commission (1964). The significance of the Institute as expressed by the Commission was as follows:

> The Commission regards the establishment of the Institute as a task of high priority and to this end has made concrete recommendations as to its siting and buildings, as well as to the general nature of its courses and its staffing. It recommends that the diploma course in engineering should begin in 1967, but there are many other fields in which the Institute should gradually be active such as higher commercial and management subjects and more advanced training of teachers in certain arts and crafts, while research must not be neglected. The institute must be self governing, under a Council appointed by the administrator, representing the House of Assembly. This Council should include at least two experts in technical education from Australia and three representative of the Territory University. It should be located close to the university, in fact on the campus and ultimately might well become an institution of the University. (p. 59)

Not all recommendations of the Commissions were followed. The location of the Institute was questioned by New Guinea members of the House of Assembly and it was subsequently located in Lae on the northern shore of New Guinea. Soon after its establishment, the name of the Institute was changed to Papua New Guinea Institute of Technology when the Institute's Ordinance was amended in March 1970. Three years later the Institute acquired university status when an amendment to the Institute's Ordinance was passed by the House of Assembly in 1973. The amendment enabled the Institute to become a full-fledged university with powers to confer its own degrees.

PNGUT offers a wide range of graduate and undergraduate programs mainly in technical, engineering and commercial subjects. Degree, diploma and certificate courses are available in Accountancy and Business, Architecture and Building, Civil, Electrical, Mechanical and Communications Engineering, Agriculture, Forestry, Cartography and Valuation, Drafting and Surveying and Food and Chemical Technology. Duration of degree courses is four to five years; diploma courses, three years; and certificate courses, two years.

In response to the limited educational preparation of Papua New Guinean students, a general studies department provides service courses in Language and Social Sciences, which are designed to bring students to required standards before advancing to specialized professional courses.

Enrollments. Students are mainly citizens of PNG; however, the universities' catchment area extends to the English-speaking states in the South West Pacific. As of 1984, the total student population enrolled in PNG universities was approximately 3,510 (Rogers, 1986, p. 2276). Of these 2,007 were in residence at Waigani and Taurama campuses of UPNG, 450 resided in Goroka and 1,053 enrolled at PNGUT. The number of female students in attendance was relatively small. For example, of the 3,510 students enrolled in 1984, only 503 were female indicating a male to female student ratio of approximately 7:1.

Language of instruction. Given the facts that PNG has over 700 unwritten languages and English is an international medium, the language of instruction in the universities (as it is throughout the education system) is English. However, for many university students, English is a third or fourth language and consequently presents communication and learning challenges to both the student and the instructor, particularly in discussing basic learning and technical concepts. For example, sounds articulated by an instructor in English often activate meanings based on the students' mother tongues and other vernaculars which may be totally contrary to that intended by the instructor.

Summary

PNG's context is unique. Its people have many and diverse traditional, social, political, economic and educational practices. Consequently, the transition from traditional practices to modern systems was slow and ineffective for over 80 years but dramatically improved, bringing the country and its people from their stone age societies to a modern state in 25 years.

Socially, Papua New Guineans are members of numerous tribal communities with strong kinship and tribal ties. Most rural communities practice subsistence economy. Cash economy is more evident in the urban centers. Diverse cultures abound, as indicated by some 700 languages spoken by three and a half million people.

The political philosophy of the colonial administration, selfish economic motives of early European settlers, lack of political education and experience for the indigenous population and diverse tribal societies living in remote areas with difficult terrain were common political problems which contributed to slow development of the people.

However, since the 1960s, aspirations for a new state and society challenged all to evaluate traditional experiences and to face new problems as a united people. Much progress has been made but the fundamental social, economic and educational problems remain and continue to challenge newly acquired social, economic, political and educational institutions.

In this context the universities' primary roles included promotion of academic and intellectual traditions, conducting research, and teaching to meet the challenges and needs of the state. Specifically, they were required to address problems unique to the Territory and to help educate and train its people for tasks in the government and the economy, and to prepare them to meet the demands of their new society. Although they have been relatively successful, universities today must continue to address these problems to be effective institutions of that society.

CHAPTER 3

RELATED LITERATURE

This chapter reviews relevant literature on the nature of organizational and university goals. Discussions begin with goal definitions, functions, problems, goal-setting and identification, organizational effectiveness and efficiency and continues on to traditional university goals and their impact on modern university structures. Finally, approaches to the study of goals are briefly discussed, especially the Institutional Goals Inventory (IGI) and other goal-related studies.

Organizational Goals

Evidence abounds in the literature that the concept of goal is central to the study of organizations. According to Gross (1969), the notion of goal is coincidental with that of organization and the presence of organizational goals and goal-associated activities often define the characters of modern organizations. "It is the dominating presence of a goal which marks an organization. . . from all kinds of system" (p. 277).

Parsons (1961) posits that goal attainment is an essential aspect of any organizational system and argues that all systems, in order to survive, must attain whatever goals they set out for themselves (p. 32). He asserts that the attainment of goals in organizations, in particular, takes precedence over other problems. Perhaps the most convincing testimony to this fact comes from Hall (1977) who succinctly concludes, "there is still the simple but basic fact that [an] organization would not exist if it were not for some common purpose" (p. 83).

Definition

Goal definition is a complex and variable issue. According to Etzioni (1964) goals are desired future states or conditions which organizations strive to achieve. Etzioni (1964) explains that it is "a state which we seek, not one which we have. An organizational goal is that future state of affairs which the organization as a collectivity attempts to bring about" (p. 6). Kast and Rosenzweig (1974), however, concede that the concept has a variety of definitions and meanings which are dependent on writers' perspectives or purposes. They cite missions, purposes, objectives, targets, quotas and deadlines as examples (p.156). The literature generally favours the view held by Perrow (1970) that the concept is unusually resistant to precise, unambiguous definition yet some definition of goal is necessary to undertake any meaningful analysis of organizations.

Functions

Organizational goals serve a variety of functions. They serve as: (1) orientations for future state of affairs that an organization strives to realize; (2) guidelines for organizational activities; and (3) sources of legitimacy which justifies the activities of an organization and its existence (Etzioni, 1964, p. 5). Further, goals guide various individuals and groups to organizationally desired activities. They reduce uncertainties in decision-making processes, serve as bases for organizational learning and adaptation, provide bases for structural design by setting initial constraints, determine appropriate structures for certain tasks and set the framework for planning and control in a system. Goals also serve as standards by which members of an organization or its clients measure organizational effectiveness (French, Kast and Rosenzweig, 1985).

Problems

Perrow (1970) identified three problems commonly associated with the concept of goal. First is the debate that organizations do not have goals, only individuals do. When accepted, it leads to such questions as: Whose goals constitute the goals of an organization? Should it be the goals of the executives? Gross (1969) claims the latter is possible for a small ideological organization where personal values coincide, but may not necessarily be the case in a complex organization. He argues that, "once organizations grow large then one must be concerned with the possibility that there will be many persons in a position to influence the goals of the organization" and "one cannot assume that private and group goals will coincide" (p. 278). According to Gross (1969),"there can be as many desired states as there are persons in it, if not more" and "what appears to be goals from the point of view of the top administrator may not be goals at all from the view of those further down" (p. 278). Hall (1977) adds, "even in an organization in which there is high participation in decision making and strong membership commitment, it is unlikely that there will be total consensus on what the organization should attempt to do, let alone on the means of achieving these ends" (p. 68).

The second problem is that goals are hard to observe and measure (Perrow 1970, p. 134). This raises such questions as: How do you observe, let alone objectively measure, the multiple goals of an organization? Should the researcher focus on the behavior of all members of an organization or only on the powerful ones? What constitutes goal-oriented behavior? How can one determine who is powerful and who is not? Should one take account of individual perceptions or focus on official goal statements? Does a society ever influence the goals of its organizations, individuals and groups?

According to Hall (1977), organizational goals are distilled from interactive desires of members, pressures from the environment and the internal system. Thompson and McEwen (1958) and Yuchtman and Seashore (1967) refer to the complex dynamic processes among individuals, groups and the environment in which organizational goals exist and debate that they be accounted for in setting goals and assessing organizations. They argue that the interdependence of complex organizations with the larger society has consequences for organizational goal identification and assessment.

The third problem relates to our "ability to distinguish between goals and means" (Perrow 1970, p. 134). This problem originates from the complex and variable definition of goals. What may be perceived as goals by one may be another's means toward some higher or more general goals. Operatives goals may be viewed as means to achieve abstract goals. The following discussions can only assist us in appreciating the magnitude of the problem.

According to Hall (1977) and Perrow (1970), abstract goals are helpful for organizational direction, but must be converted to specific guides for the actual operations of an organization. Hall explains that ". . . operative goals. . . designate the ends sought through the actual operating policies of the organization and tell us what the organization is actually trying to do regardless of whether the goal is official or otherwise" (p. 72). They are the interacting residue of dynamic interactions among official goals and internal and external factors.

According to Gross (1969), means should be interpreted as a subsystem's goals. He debates that no organization can spend all the time of its participants in goal attainment: "At least some of the time, and perhaps a great deal, must be spent on activities which in no sense make even an indirect contribution to goal attainment" (p. 282). This view asserts that the way a system functions and what it generates irrespective of products can become goals for members. Gross (1969) emphasized that goal attainment is one imperative but not the only one. There are other imperatives such as organizational adaptation, integration, pattern maintenance and tension management. "The import of these categories is that a good part of any system's energies must be given over to activities that do not contribute in any direct sense to goal attainment but rather are concerned essentially with maintaining the system itself" (p. 283).

Determining Organizational Goals

Determining organizational goals can be a complex process. Nevertheless, the importance of goals for organizations offers little allowance for abeyance.

Hall (1977) and Perrow (1964) concur that determination of organizational goals is vital for any associated activity, be it research or organizational management. While no consensus prevails among members about what activity or behavior precisely constitutes an organization's goal, articulation of goals by members and related activities are helpful indicators of its underlying goals.

Etzioni (1964), Gross (1969), Gross and Grambsch (1974) and Zald (1967) claim that major decision makers are valid sources of information and suggest that by focusing on their intentions and activities through interviews, questionnaire surveys and observations organizational goals can be determined. They add that studying minutes of board meetings, examining official documents, analyzing division of labor, work-flow and allocation of resources, taking account of operative goals of institutions, and focusing on intentions and activities of people are alternatives for determining the organization's actual goals.

According to Zald (1967) the perspectives and values of the executives help us to understand organizational priorities and allow us to assess the extent to which official goals are accepted and pursued or are displaced and diverted (p. 212).

Etzioni (1964), Gross (1968, 1969), and Gross and Grambsch (1974), suggest that researchers obtain staff perspectives, through interviews and questionnaires, to establish what they see as the organization's goals, as distinct from their own goals. Gross (1969) cites two kinds of evidence, intentions and activities , as necessary before one can confidently suggest that a goal is present.

Intentions are likely to involve verbal statements or influences that may be made from symbolic acts, gestures or other types of meaningful acts. Activities connote what persons in the organizations are observed to be actually doing, for example, how they spend their time and how resources are allocated. Individual and group intentions and activities must be distinguished from an organization's output and studied in complement to it. One can understand what the organization is attempting to do through the participants' views of what they believe the organization is doing or what they feel are its aims and general direction. Gross (1969) debates:

> Before one can confidently speak of a goal one needs to have some degree of correspondence between intentions and activities. On the other hand, evidence with reference to outputs does not necessarily refer to goal activity but rather to the organization's relative success in goal attainment. (p. 285)

Setting Organizational Goals

Etzioni (1964) points out that most organizations have a formal system of setting and changing organizational goals. Such methods include legislative enactments, formal votes of an organization's governing body, or directives from the major shareholders and political leaders. In practice, however, goals are often set in a web of power plays involving different groups within and outside the organization, and with reference to societal values or goals which govern behavior in general, as well as behaviors of individuals and groups in a particular society.

Other factors which influence organizational goal-setting include internal structures such as departments, divisions and personalities, and external environmental forces such as government policies and availability and acquisition of resources. Etzioni (1964) suggests that departmental interests and personalities in an organization play significant roles in goal-setting. The presence and absence of departmental leadership qualities can set or unravel an organization's goal.

Etzioni (1964), Scott (1981), Gross (1969), Thompson and McEwen (1958) underline the significance of environmental forces in setting organizational goals. Etzioni (1964) suggests that most organizations are less autonomous than they first appear to be, and cites the impact of public expectation on the custodial and rehabilitation goals of prisons as exemplary.

From a system's perspective, Scott (1981) observes that an organization, as a sub-system of a larger societal system, does not totally control all its resources and is dependent on acquiring resources from the external environment. Gross (1969) points out that the goal of one sub-system can be a means or input of a different sub-system.

> When goals are defined in this manner, it becomes clear that those within organizations have only a limited amount of freedom to set the goals of the organization. They will be constrained by what the outsiders can be persuaded to accept. (p. 279)

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Thompson and McEwen (1958) conclude:

> A continuing situation of necessary interaction between an organization and its environment introduces an element of environmental control into the organization. While the motivation of personnel, including goal-setting officers, may be profits, prestige, votes or salvation of souls, their efforts must produce something useful or acceptable to at least a part of the environment to win continued support. (p. 25)

Effectiveness and Efficiency

Any discussion about organizational goals is incomplete without reference to organizational effectiveness, as both concepts are complementary. Hall (1977) testifies that "analysis of goals. . . is a rather empty exercise until the second part of the equation is added: because a goal is something that is sought, the seeking leads to the issue of goal accomplishment, or effectiveness" (p. 85).

Generally, most organizations are designed to be effective and efficient social units. The actual effectiveness of an organization is determined by the degree to which it realizes its goals. Efficiency is measured by the amount of resources used to produce a unit of output. In some cases organizational efficiency may increase as costs decrease; however, while efficiency and effectiveness may go hand in hand, one does not guarantee the other. For example, an emphasis on organizational efficiency may detract from organizational goal achievement, particularly in human service organizations such as schools, universities and hospitals.

There is no simple answer to the problem of over-emphasis on one or the other of the concepts. But organizations can and must recognize the problem and use as many instruments to assess the variables affecting organizational goals, effectiveness and efficiency.

Two commonly used models for identifying organizational goals and assessing organizational effectiveness are the system and goal models.

According to Etzioni (1964), the system model "constitutes a statement about relationships which, if actually existing, would allow an organization to maintain itself and to operate" (p. 19). The system model is viewed as a working model of a social unit capable of achieving a goal. Etzioni identified two types: a survival model and an effectiveness model. The former allows the system to survive and continue to exist, while the latter defines a pattern of inter-relations among elements of the system which would make it most effective in the service of a given goal, thus lending itself as a model for evaluating the impact of past organizational changes on present organizational activities. According to Etzioni (1964), the system model

> explicitly recognizes that the organization solves certain problems other than those directly in the achievement of the goal, and that excessive concerns with the latter may result in insufficient attention to other necessary organizational activities, and to a lack of coordination between the inflated goal activities and the de-emphasized non-goal activities. (p. 17)

The goal model approach to organizational analysis "focuses on the study of goals, and organizations as their servants, obedient or otherwise." (Etzioni, 1964, p. 16). It involves identification of organizational goals and, in the case of organizational effectiveness, assessing the degree to which an organization achieved its goals. The utility of the goal approach for determining organizational effectiveness has been questioned by some analysts (Etzioni, 1961, 1964; Georgiou, 1969). Critics argue that goals, as norms or sets of meanings depicting target states, do not necessarily reflect the realities of organizations as social systems, operating within the constraints imposed by the social actors.

Despite these shortcomings, the goal approach has much to offer researchers involved in organizational goal identification. In a study of correctional institutions for delinquents, Zald (1967), emphasized that this approach is central to organizational analysis because

> goals limit the attention of members of an organization to a certain object by defining what action is organizationally relevant. Second, the practices or technological processes which are required to achieve specific goals impose restrictions on the activities of personnel and on the distribution of resources. Thus they affect such basic social phenomena as the division of labor, communication patterns and authority structures. Third, goals are centrally involved in the adaptation of organization. (pp. 206-207)

Studies concerned with organizational goal identification and effectiveness have two phases. The first involves identification of multiple categories of goals in an organization. The second determines the degree to which current activities of the organization achieve such goals. It is in the latter that the shortcomings of the goals approach become apparent. But in the former phase, the benefits of the goals approach can be appreciated.

In sum, organizational goals are influenced by the structure, process and people of an organization. As suggested by Price (1972), research on goals must examine the organization's structure, process or activities, personal views of its chief executives, board members and clients, as well as activities of its external environment. The system and goals approaches to organizational analysis offer complementary methods and are helpful for this study.

Goals and Conflict in Universities

The following discussion outlines the relationships between traditional university goals, related structures and conflicts resulting from modern societal demands placed on universities.

Universities are complex and archaic organizations (Perkins,1973). Two reasons are offered: the structure of a university does not necessarily describe either the actual power or responsibilities in the organization; and newly acquired functions cannot be totally discharged through the traditional formal structure established in the organization. As a result relevant and complementary structures for new functions may be in direct conflict with traditional organizational structures serving more traditional goals. It is this situation which prompted Kerr (1982) to refer to the modern American university as a "multiversity" in contrast to the nature of a single and unified university of the past. Kerr (1982) points out that the multiversity is a pluralistic institution with many purposes, several centers of power and serves many client groups (pp. 136-137). Such characteristics not only enhance the institution's image, they strain traditional relationships and sustain conflicts. For example new functions place new demands on resources and structures.

Perkins (1973) adds that new functions of a university have organizational requirements that are significantly different from those necessary for teaching, and argues that this is perhaps the primary problem that continues to challenge planners and administrators of modern universities.

Four commonly stated goals of universities are teaching, research, public service and democratic community. These are briefly described to provide insight into the complex nature of goals and their conflicting and dynamic impact on the nature and structures of universities.

Teaching. Teaching is the oldest mission of universities. It can be traced to the middle ages when the search for knowledge shifted from the authority of the church to secular institutions. The basic organizational structure of universities such as Paris, Cambridge, Oxford, Bologna and Salamanca centered on providing a convenient environment for teaching: an interaction between master and scholar. Freedom to pursue ideas without interference from society was considered important for teaching. However, the universities were required by the society to meet specific interests such as training and licensing of new elites, hence the need for some form of accountability, which conflicts with academic freedom. But as long as the central and almost exclusive mission was teaching, conflict rarely arose. Perkins (1973) summarized the impact of teaching on universities of the middle ages to the sixteenth century as follows:

> By the opening of the sixteenth century the general structure of the university as a teaching institution had been substantially established, including the main organizational features that are still in evidence today. . . In order to deal with a body of expanding knowledge, the teaching enterprise required continuity, a fixed meeting place, close connection between master and scholar, independence from church and state and a minimal apparatus that could support these needs. (p. 6)

Research. After the sixteenth century, universities evolved and other functions complementary to teaching were acquired, most notably, research, public service and democratic governance. Initially research was considered an important adjunct to teaching. Private studies, reflection, and writing were vital to the professor "in keeping his mind sharp, his lectures fresh, his students intellectually alert" (Perkins, 1973, p. 6) and remained so until attention shifted from the transmission of "truths" to a search for knowledge led by early German universities.

> This shift in the scholars' concerns gave rise to an enterprise that followed its own dynamic laws of growth. By the end of the nineteenth century it was clear that research had become an end in itself. . . . Today teaching and research are missions with distinctive styles and different, often contradictory requirements for organizational structure. (Perkins, 1973, pp. 6-7)

Perkins (1973) describes the conflicting requirements of research on universities as follows:

> The growth of research has both undermined traditional organizational structures, such as the department, and created new structures that are frequently in competition with existing ones. The traditional pattern of organization that we have inherited from the Middle Ages --faculty oriented with administration providing the minimal coordination necessary to keep faculty in some kind of marching order-- no longer answers the complex needs of the modern university. . . . And the lack of any overall doctrine to

> embrace both the teaching and research functions has seriously weakened the organizational spine of the university. (p. 10)

Such conflict prompted Cohen and March (1974) to classify modern universities as organized anarchies due to their problematic goals, unclear technology and fluid participation of their members. They argue that it is difficult to impute a set of goals to an organization which appears to operate a variety of inconsistent and ill-defined preferences and add that although the organization manages to survive and produce, it does not understand its own processes and operates on the basis of a simple set of trial and error procedures, the residue of learning from the accidents of past experiences, imitations, and inventions born of necessity.

Furthermore, university "participants vary among themselves in the amount of time and effort they devote to the organization; individual participants vary from one time to another. As a result standard theories of power and choice seem to be inadequate; and the boundaries of the organization appear to be uncertain and changing" (Cohen and March, 1974, p. 3).

Public service. According to Perkins (1973) the goal of public service "added one more dimension to the university's organizational agony" (p. 10). Although the goals of research and teaching could be seen as service to the public through production of scholars, teachers and educated citizenry, society was requiring more from universities by way of direct public service. The public expected the university to provide constructive guidance for public policies on social and economic issues. When such expectation is not achieved, the relationships between the parties are strained, resulting in withdrawal of public fiscal and moral support. On the other hand, commitment of substantial resources to public service could mean compromising the requirements of other functions in the university. The problem intensifies when society cannot agree on priorities for its universities. Furthermore, universities have not been equipped to respond adequately to society's many demands. Perkins (1973) describes the contradiction between being of service to the public and maintaining institutional autonomy as follows:

> Serving the public involves public judgement about how well the service is performed. But the imposition of a set of criteria outside the university goes counter to the concept of university as an autonomous institution, that sets its own standards, free from societal pressure. Similarly, this imposition is contrary to the tradition of autonomy of the faculty member within the classroom. (p. 11)

Democratic community. This function stems from the notion that the policies of the university must conform to the social aspiration of its members, and the style and organization of the institution must conform to the ideals of a democratic society. This perspective questions the authority of the trustees as corporate owners of the institution and suggests that the overall authority rests with the constituent members of the campus, namely faculty, students and staff.

Such requirements, demanded changes in universities' organizational structures, for example, allowing students some say in determining the content of their courses; however, departmental consideration of students' views would compromise faculty's academic freedom. Perkins (1973) points out that traditional structures such as departmental meetings designed for decision about teaching may be dysfunctional for other functions such as research, public service, and creating an ideal democratic community (p.12.).

In sum, modern universities are based on a traditional structure that was appropriate for the teaching function but is inadequate to service the many missions demanded of modern universities. Modern universities have many, complex, divisive and often contradictory goals. Their complex natures require different and varied organizational structures in different societal contexts. Questions are being raised (Cohen and March, 1974; Kerr, 1982) about the true nature and definition of modern universities. Organizational anarchies and multiversities are examples of attempts to define the actual nature of these institutions. Answers to these problems may lie in a better understanding and communication of the contextual nature of specific societies and their relationships with universities' traditional functions.

Institutional Goals Studies

This section briefly discusses approaches to institutional goal studies, describes in some detail the Institutional Goals Inventory (IGI) and reviews several goal related studies.

Many approaches and techniques have been used in the study of institutional goals. The goals and system approaches noted in this chapter are examples. Among the suggested instruments used to determine organizational goals are observations, document reviews and the delphi technique. It must, however, be noted that different approaches produce varied results indicating a need for an instrument that would be functional but flexible enough to accommodate different institutional contexts.

An instrument developed by Gross and Grambsch (Gross, 1968; Gross and Grambsch 1974) represents significant progress toward this end, particularly for universities and higher education institutions. Gross and Grambsch developed an "is" and "should be" response scale for an inventory of 47 goal statements. Faculty and administrators at Ph.D-granting universities throughout United States were asked to state their goal perceptions based on two statements: (1) how important each goal "is" and (2) how important it "should be," at their university.

Institutional Goals Inventory (IGI)

Based on the Gross and Grambsch (1974) study Peterson and his colleagues (Peterson and Uhl, 1975) at the Center for Educational Testing Service (ETS), developed an Institutional Goals Inventory (IGI) for use by higher education institutions to assess beliefs by different constituent groups about the present (Is) and preferred (Should be) importance of their institution's goals. The IGI was designed to relate "is" and "should be" responses with a series of goal statements to identify goals and establish perceptions of priorities in higher education institutions.

The instrument consists of 90 goal statements, of which 80 relate to 20 goal areas (See Appendix A). The goal statements are scrambled randomly within five general categories. The categories include (1) the student learning goal statements for seven goal areas - i.e., academic development through to vocational preparation, (2) advanced training and research; (3) the socially oriented goals, i.e., meeting local needs through social criticism/activism; (4) the process goals, i.e., freedom through to accountability/efficiency, and (5) miscellaneous statements. The remaining 10 are miscellaneous statements, each reflecting a goal judged as sufficiently important to be included in the questionnaire but only as single statements.

Of the 20 goals, 13 are identified as outcome goals while seven reflect desired processes which are considered necessary for achievement of outcome goals.

Optional features. To enhance the general applicability of the instrument, the IGI incorporates three optional features. Option one allows for inclusion of up to 20 additional statements of particular interest to the college or university under study. Option two enables a college or university to add up to six additional respondent background questions with each one providing up to 10 response alternatives. Option three allows the researcher to determine respondent subgroup categories for analysis. Optional items may be developed locally but are analyzed and tabulated in a similar manner as the main IGI items.

Definition of IGI goals. Peterson and Uhl (1977) defined the 20 goals as follows.

> Outcome goals:
>
> *1. Academic Development:* Acquisition of general knowledge; preparation of students for advanced scholarly study; and maintenance of high intellectual standards on campus.

2. *Intellectual Orientation:* An attitude about learning and intellectual work. It means familiarity with research and problem-solving methods; an ability to synthesize knowledge from many sources; a capacity for self-directed learning, and a commitment to lifelong learning.

3. *Individual Personal Development:* Identification by students of personal goals and development of means of achieving them; enhancement of sense of self-worth and self-confidence.

4 . *Humanism/Altruism:* Reflects respect for diverse cultures; commitment to working for world peace; consciousness of important moral issues of the time; and concern about the welfare of man generally.

5. *Cultural/Aesthetic Awareness:* Entails a heightened appreciation of a variety of art forms; required study in the humanities; exposure to diverse forms of art, and encouragement of active student participation in artistic activities.

6. *Traditional Religiousness:* A Christian relationship that is orthodox, doctrinal, usually sectarian and often fundamental - in short, traditional rather than secular or modern.

7. *Vocational Preparation:* Offering specific occupational curricula; programs geared to emerging career fields; opportunities for retraining or upgrading skills; and assistance to students in career planning.

8. *Advanced Training:* Provision of post graduate education. It means developing and maintaining a strong and comprehensive graduate school; providing programs in the professions; and conducting advanced study in specialized problem areas.

9. *Research:* Doing contract studies for external agencies; conducting basic research in the natural and social sciences; and seeking generally to extend the frontiers of knowledge through scientific research.

10. *Meeting Local Needs:* Providing continuing education for adults; serving as cultural center for the community; providing manpower for local employers; and facilitating students in community-service activities.

11. *Public Service:* Working with governmental agencies in social and environmental policy formation; committing institutional resources to the solution of major social and environmentai problems; training people for disadvantaged communities; and generally being responsive to regional and national priorities in planning educational programs.

12. Social Egalitarianism: Open admissions and planning suitable programs for all admitted; providing educational experiences relevant to the evolving interests of minority groups and women; and offering remedial work in basic skills.

13. Social Criticism/Activism: Providing criticism of prevailing values; offering ideas for changing social institutions judged to be defective; helping students learn how to bring about change in a society; and being engaged as an institution in working for basic changes in a society.

Process goals:

14. Freedom: Protecting the rights of faculty to present controversial ideas in the classroom; not preventing students from hearing controversial points of view; placing no restrictions on off-campus political activities by faculty or students; and ensuring faculty or students of their rights to choose their own life-styles.

15. Democratic Governance: Decentralization of decision-making arrangements by which students, faculty, administrators and governing board members can all be significantly involved in campus governance; opportunity for individuals to participate in decisions affecting them; and governance that is genuinely responsive to the concerns of everyone at the institution.

16. Community: Maintaining a climate in which there is faculty commitment to the general welfare of the institution; open and candid communication; open and amicable airing of differences; and mutual trust and respect among students, faculty and administrators.

17. Intellectual /Aesthetic Environment: Provision of a rich program of cultural events; maintaining a campus climate that facilitates students' free-time involvement in intellectual and cultural activities; an environment in which students and faculty can easily interact informally; and maintaining a reputation as an intellectually exciting campus.

18. Innovation: A climate in which continuous innovation is an accepted way of life; it establishes procedures for readily initiating curricula or instructional innovation; and more specifically, it means experimentation with new approaches to individualized instruction and evaluating and grading student performance.

> *19. Off-Campus Learning:* Recognition of time away from campus in travel or work-study; study on several campuses during undergraduate programs; awarding degrees for supervised study off the campus; awarding degrees entirely on the basis of performance on an examination.
>
> *20. Accountability/Efficiency:* Use of cost criteria in deciding among program alternatives; concern for program efficiency; accountability to funding sources for program effectiveness; and regular submission of evidence that the institution is achieving stated goals. (pp. 5-8)

Reliability of IGI. Multiple procedures were used to support the construct validity of the IGI. Among them were correlation with other external variables, comparison between institutional types and related sub-groupings and factor analysis. Other means (See Appendix C) were employed to ensure construct validity. Peterson and Uhl (1977) conclude that these procedures have provided support for the validity of the IGI (p. 74).

In supporting the significance of IGI, Cornish (1977) cites that its results have potential applications in institutional goal assessment and priorities in different post secondary institutions and various sub-systems of higher education (p. 64). Peterson (1970) adds that the IGI is useful in planning, evaluations, management information systems, and for accountability, clarifying goals as fundamentals of policy, and as general decision guides. Since its development in the early 1970s, the IGI has been widely utilized in research on university goals.

Other Goal-Related Studies

The following reviews IGI and other goal-related studies. Gross and Grambsch's (1974) study indicated that the seven top-ranked "is" goals in the United States were: (1) protect the faculty's right to academic freedom; (2) increase or maintain prestige of the university; (3) maintain top quality in those programs felt to be specially important; (4) ensure the confidence and support of those who contribute substantially to the finances and other material resource needs of the university; (5) keep up to date and responsive, (6) train students in methods of scholarship, scientific research and creative endeavor and, (7) conduct pure research. Substantial variance was found between the "is" and "should be" perceptions and a relative lack of importance was attached to student-related goals.

A study conducted by Nash (cited by Peterson and Uhl, 1977) at Columbia University, requested academic deans in United States universities to indicate the extent to which their college emphasized 64 goals statements. The results showed that different goals existed for different types of institutions. But goals such as "to improve the quality of instruction" and "to increase the number of books in the library" were highly emphasized in most institutions.

A similar research sponsored by the Danforth Foundation (cited by Peterson and Uhl, 1977) revised the Gross and Grambsch questionnaire and surveyed administrators, faculty, and students at 14 private liberal arts colleges. The study concluded that more emphasis was placed on student-oriented activities and teaching. Research and research-related activities were of less significance. There was significant agreement among administrators, faculty and students as to the goals of their respective colleges. Marked differences were noted between the respondents' perceived actual and preferred goals.

Martin's study (cited by Peterson and Uhl, 1977) on institutional character in eight colleges and universities established that little concern was expressed about institutional goals. However, the study indicated that substantial differences existed between older and younger institutions in the degree of emphasis placed on institutional goals and objectives. New colleges placed greater emphasis on institutional goals and objectives. In older colleges faculty's concern for their academic standing among their peers and daily teaching and research routines were given as possible reasons for their lack of concern for institutional goals.

A preliminary IGI study by Bushnell in 1973 (cited by Peterson and Uhl 1977) concluded that there was a high degree of consensus among community junior college administrators, faculty and students on the major goals to be served by their colleges. Differences were noted in the degree of emphasis placed by respondent groups on the major goals. College presidents placed greater emphasis on community needs. Faculty emphasized students' personal development, whereas the students pressed for more egalitarian goals such as an open door policy for college admission and a better and far reaching financial aid system.

Comparing his study with that done by Gross, (1968) Gross and Grambsch (1974), Bushnell noted that community college presidents, especially those in private colleges, gave greater ratings to student-oriented goals than did university administrators.

A replication study by Gross and Grambsch (1974) sampled some 4,500 administrators, faculty and students. The result showed little change in the goal beliefs of the respondents. University goals remained fundamentally the same as in the 1964 study. Research and scholarly pursuits were stressed over students and their needs.

A similar study conducted by Bayer in 1973, (cited by Peterson and Uhl, 1977) elicited responses from some 4,200 respondents representing 301 colleges and universities. The results were presented separately by types of institutions (i.e., two-year colleges, four-year colleges and universities). The goal most frequently rated as very important was "to master knowledge in a discipline." A comparison of university faculty with college faculty showed that college faculty rated their institutions higher on instrumental goals, such as "moral character development," "to prepare students for employment after college," and "providing local community with skilled human resources," than did university faculty who stressed academic goals.

Several goal-related studies were conducted in Canada. They include Campbell (1972), Cornish (1977), McNeal, Konrad and Hodysh (1981) and McNeal (1982). The studies by McNeal, Konrad, and Hodysh (1981), and McNeal (1982) have particular relevance for this study.

McNeal, Konrad and Hodysh (1981) surveyed the literature on purposes of Canadian universities and concluded that: (1) Canadian universities espoused and cherished goals that linked them to the mainstream of western university traditions; (2) older universities especially reflected this traditional orientation towards research and advanced training; (3) locations of universities also influenced their purposes. In the Maritimes and Quebec, cultural values were manifested as significant purposes for universities , while universities in the western provinces placed less emphasis on cultural values. The authors explained that the absence of clearly defined cultural values in western Canadian provinces may have accounted in part for their marked lower commitment to humanism/altruism and traditional religiousness. They concluded that although additional factors had influenced institutional developments, purpose statements seemed to reflect the history, locations and cultures of each institution.

McNeal (1982) modified the IGI for use in Canadian universities, and compared the perceptions of presidents and board chairpersons by location, age and size of the universities. The results suggested that the traditional goals of teaching, research and public service were not as important as a number of process goals, especially institutional reputation in the community. Many teaching-related goals were of high importance. Research was found to be of medium importance. Public service was found to be even lower than teaching and research.

McNeal (1982) also noted a number of significant differences in perceptions of presidents and board chairpersons. Presidents placed more emphasis on the traditional goals of teaching and learning whereas board chairpersons placed more importance on efficient management and community-related goals.

Respondents' perceptions about future goals revealed that there was an increased emphasis on efficiency and planning in universities. Importance was placed on increasing enrollment and development of minority students, as well as on faculty evaluation and employment patterns. Other areas perceived to be of future importance included community liaison, accountability, commitment to innovative programs, development of educational technology and students.

Institutional goal studies suggest that differences and similarities in respondents' perceptions vary widely. Variations are dependent on the context of particular institutions, and factors including institutional type, history and cultural setting, age of institution, program duration, institutional clients and type of respondents.

The IGI has gained acceptance as a reliable and valid approach to the study of institutional goals. However because of its statistical nature, it provides little insights as to why as to why respondents emphasize certain goals and not others, and challenges the researchers to provide interpretations for the data. Supplementary methods such as interviews, delphi technique or observations may be helpful to enhance IGI data.

Summary

Discussion in this chapter suggests that (1) the concept of goal is ambiguous and its definition varies with different perspectives; (2) organizational goals are numerous and serve many functions; (3) goal-setting,.identification and assessment processes are complex and challenging yet of great significance for research, and organizational management; (4) individuals, groups and organizational clients influence every goal-setting process and their perceptions are valuable in determining organizational goals; (5) research approaches to goals and organizational analysis must take account of an organization's structure, its processes or activities, views of its executives, board members, employees and clients and other environmental factors; (6) universities, as organizational systems, have acquired multiple and often conflicting goals and developed new structures which make modern universities different and sometimes contradictory in nature to medieval universities; (7) IGI and other goal-related studies of universities and other higher education institutions often reflect institutions' unique environments and client needs. Related factors include history, culture and perspectives of the people in the societies where universities are set. (8) The IGI has gained acceptance as a reliable and valid approach to the study of institutional goals. One common observation is the reliability of IGI instrument to prioritize institutional goals. A noted shortfall of the instrument is its statistical nature, it provides little insight as to why respondents emphasize certain goals and not others, and allows the researcher to provide interpretations of the data. Therefore utilization of complementary methods such as interviews, the Delphi technique and observations, to supplement IGI data is justified.

CHAPTER 4

DESIGN AND METHODOLOGY

This chapter presents the conceptual framework, instrumentation, data gathering and analytical procedures used in this study.

Conceptual Framework

The conceptual framework for this study is derived from the literature, especially from the work of Gross and Grambsch (1974) who conceptualize universities as organizations, and Thompson and McEwen (1958), and Hall (1977) who conclude that goals are sub-systems of organizations and are the results of dynamic interactions among external and internal factors in an organization. The framework presented in Figure 4 highlights two primary sources of university goals, outlines possible areas of goal-influence and suggests a triangulation approach to goal identification.

The external environment and the institution are primary sources from which university goals are derived. Social, cultural, economic, political and educational forces in the environment contribute to the formation of goals in universities. Likewise, university structures, clients, staff and programs dynamically interact with environmental forces to define institutional goals. The varied nature of these determinants demands a multiple approach to goal identification processes hence, the use of survey, interviews and documents in this study.

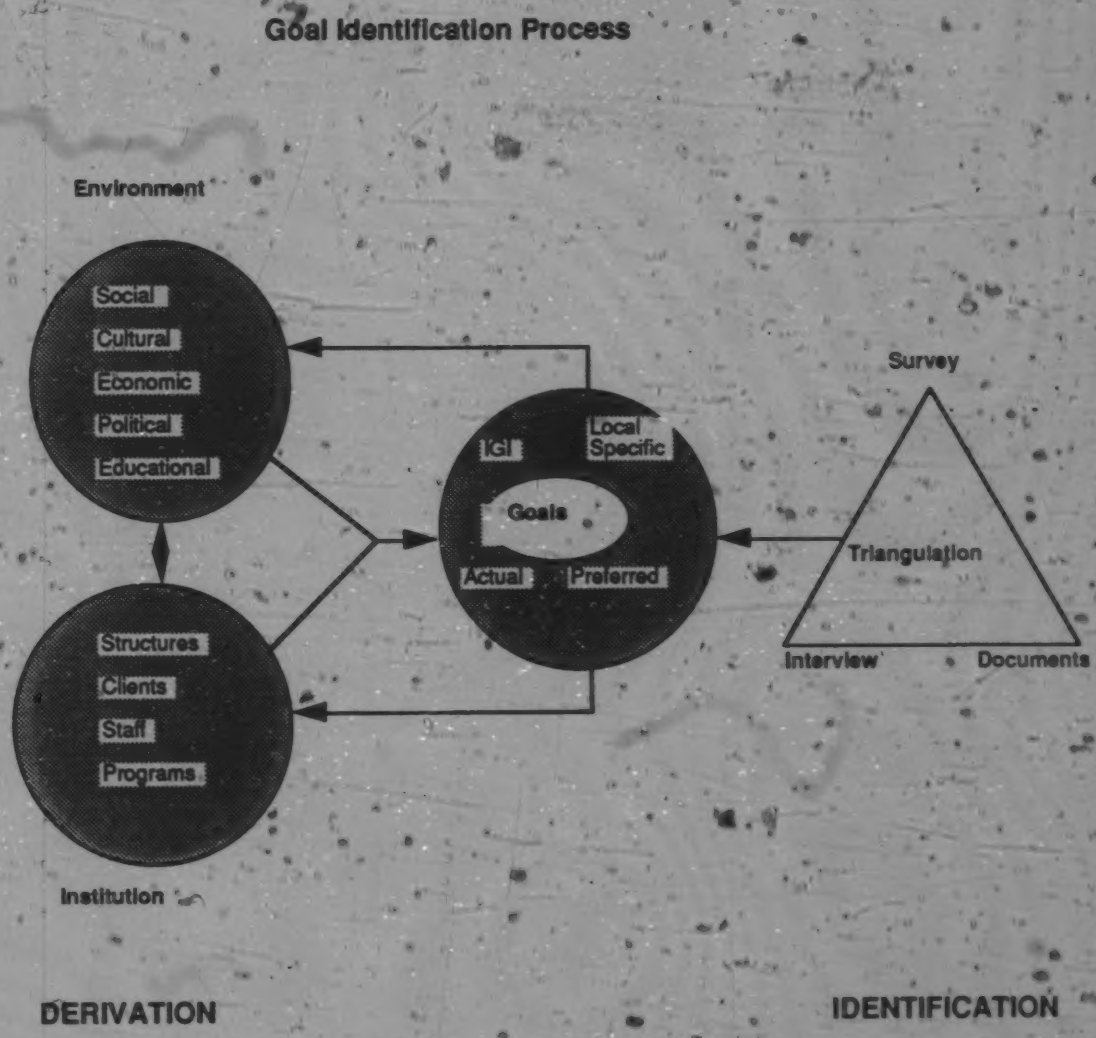
Goal Identification Process
Environment
Social
Cultural
Economic
Political
Educational
Structures
Clients
Staff
Programs
Institution
IGI
Local Specific
Goals
Actual
Preferred
Survey
Triangulation
Interview
Documents
DERIVATION
IDENTIFICATION

Figure 4.

Conceptual Framework

Instrumentation

This is a descriptive study in that it attempts to identify and describe respondents' goal perceptions at UPNG and PNGUT. Three instruments, (a) questionnaire survey, (b) interview guide and (c) document analysis protocol were developed to gather relevant data. The steps taken to develop and administer each instrument are described in this chapter.

The need to examine original documents, conduct face to face interviews, and maximize questionnaire returns all suggested that a field approach to data collection was necessary. Consequently the researcher traveled to PNG and spent three months (Aug.12-Nov.12, 1987; divided equally at each of the three campuses of the two universities) collecting information for this study.

Questionnaire Survey

A study of the functions of the IGI survey (See chapter 3) showed striking similarities with the purposes and research questions articulated in chapter one and convinced the researcher that use of the same instrument would serve this research as well as generate potential data for comparative studies of higher education institution goals. Consequently, with permission from Educational Testing Service, the IGI was modified (See Appendix A, statement nos: 36, 42, 43, 49, 52, 54, 58, 85) for use in PNG universities. Prior to the survey's administration, a pilot test was administered in Alberta to 12 people with PNG experience. The pilot-test indicated a need to construct additional specific local goal statements to address issues most pertinent to university education in that country. Consequently, additional statements (statement nos: 91- 100) were developed to supplement data collected by the main IGI instrument. Respondents were asked to rate 90 IGI and 10 local specific goal statements (Appendix A) on a five-point scale--(5= Of extremely high importance ; 1= Of no importance or not applicable). The ratings were based on two judgements, (1) how important a goal is, and (2) how important that same goal should be, in the respondent's university.

Sample. The study population comprised approximately 500 academics and senior administrators including council members, heads of academic departments and institutes in two PNG universities. The total number of respondents to whom questionnaires were distributed was 220. All Council members and senior administrative staff participated in the survey. A 30% random sample of academic staff was selected from the institutions' 1987 staff registry.

Distribution of questionnaire. Most questionnaires were personally delivered to respondents. Others were mailed to respondents through the institutions' internal mail system. Completed questionnaires were either collected by the researcher or returned through the internal mail system to a given institutional address.

Three follow-up strategies were used to maximize returns. One week after the initial delivery date, general reminder-notices were published in the institutions' weekly bulletin informing respondents of the significance of their contributions to the study and the expected date of returns for the questionnaires.

Following the third week personal telephone enquiries were placed to respondents who had not responded to the survey to assure them of their anonymity and to establish possible reasons for their non-participation. In cases where legitimate reasons were provided, no further attempts were made to obtain the questionnaires. In others, where respondents had either misplaced questionnaires or forgotten to take action, replacement copies were personally delivered to respondents and each one was encouraged to complete the questionnaire by a given deadline. Finally, as a last resort, appointments were made with late-respondents to personally collect the completed information.

The last two procedures were taken following encouragement from respondents. In many instances respondents expressed the desire to participate in the study but impressed on the researcher of the need to be reminded about the task.

Rate of return. The above procedures produced a high rate of return. Tables 4.1 presents the number and percentage of distributed questionnaires and completed returns from respondents.

Table 4.1

Questionnaire Distribution and Return

Institution	**Distribution**		**Return**	
	Admin	Acad	Admin	Acad
UPNG	43	98	26 (60.5%)	88 (89.8%)
PNGUT	32	47	25 (78.1%)	43 (91.5%)
TOTAL	75	145	51 (68%)	131 (90.3%)

A total of 220 questionnaires were initially delivered to respondents at UPNG and PNGUT. Of these 43 administrators and 98 academics were from UPNG; and 32 were administrators and 47 were academics from PNGUT.

Of the 220 distributed questionnaires, 182 completed returns were received. Of these 26 were from administrators and 88 were from academics at UPNG. The remaining returns were from PNGUT -- 25 from administrators and 43 from academics. The rate of return for administrators was 68 percent and for academics, 90 percent.

Interview

A semi-structured interview guide was developed to obtain supplementary information about respondents' goal perceptions (See Appendix E). Q-Cards containing goal definitions were prepared to assist interviewees to identify and rank order the 20 IGI goals, and to serve as evidence of respondents' top five goals (See Chapter 8, Table 8.1). Interviews were conducted during the period spent on each campus of the two universities. Interview respondents (See Appendix B) were identified through a technique known as reputational nomination --the researcher solicits from interviewees and other members of the university community, names of knowledgable persons involved with universities as possible informants for the interviews.

Prior to the formal interviews, five persons who were either practicing academics or administrators participated in pilot-interviews. At the beginning of each interview the researcher explained the purpose and interview procedures and asked each respondent to Q sort the twenty goals identified on the cards.

During the interviews respondents were asked to (1) provide possible explanations for their choice of the first five goals, (2) identify some problems that are preventing the universities from achieving the same goals and (3) suggest alternative solutions that universities could use to minimize the problems or achieve such goals. Further, they were asked to suggest other goals perceived to be important for the universities in the country but had not been identified by the researcher. Discussion on the respondents first five goals then followed.

The pilot interviews revealed that (a) due to time constraints, respondents preferred to choose only the top five goals of their choice instead of the initial request to Q sort the 20 goals; (b) more time was needed to explain the instrument and establish rapport with clients; (c) there was a need to focus attention on goal related issues by focussing on the interview guide.

The above information was used to modify the interview procedure. For example, the researcher met with potential respondents at least 24 hours prior to the interviews to explain the reasons and procedures of the interviews and to solicit respondents' permission to participate. Interview guides and cards defining the 20 IGI goals were dispatched to respondents on the first visit. The visit also provided opportunities to establish "first contact" and rapport. Additional questions were attended to and, where necessary, procedural explanations were repeated.

The above procedures proved helpful: time spent during initial contact substantially minimized the time taken for "subject acquaintance" during the interviews; it enabled most interviews to be completed within the allocated time; and resulted in over 50 hours of recorded interview data.

Documentary Survey

Despite its relatively recent development, university education in PNG has been widely discussed and written about, particularly in the South-West Pacific region. Similarly the location and storage of its written history is dispersed through the region. Plans to centralize much of this information are progressing but are dependent on financial resources, the good-will of governments and authors, and on the availability of competent archivists and librarians.

These conditions had implications for the collection procedures adopted in this study and raised important questions about the quality and completeness of data collected. Some materials, such as reports of public commissions, committees and institutional handbooks and pamphlets, were readily available. Other materials of a personal or confidential nature were either unavailable or inaccessible despite much effort to retrieve them.

Despite these circumstances, the researcher from a large quantity of written material was secured for this study. Documentary data used in this report are, to a large extent, based on written materials provided by institutions, or were readily accessible in public libraries or private collections of individuals.

The following decisions were taken to establish a practical approach to data collection and analysis while maintaining, as far as possible, the quality of data. It was decided that the final list of written information should (1) cover the 25-year period (1964-89) of university development in the country, (2) contain specific references to goals, missions, priorities, or objectives of universities, (3) include relevant legal documents such as the National Constitution and university acts and statutes, (4) include significant government commission, committee and institutional reports, and (5) represent some government, institution and private citizens' views about university goals. Eighteen articles (See chapter 7) whose content met one or more of the above guidelines were finally selected for further analysis.

No claim is made that the selected information covers all materials written on university goals in PNG. Neither can it be claimed that all goals in the selected documents have been identified. It is, however, assumed that the selected articles represent some of the most common goals articulated in the literature.

Validity and Reliability

Three primary steps were taken to maintain the validity and reliability of this study. Adaptation and use of a tested and proven survey instrument-- in this case the IGI, -- was the first step. The incorporation of two supplementary data-collection techniques constitutes the second step. The use of pilot questionnaires and interviews represents the third step. Other measures taken to ensure the study's credibility include careful execution of procedures to collect information and conscious rehearsals of tape-recorded interviews followed by telephone interviews about possible interpretations of recorded conversations.

Data Analysis

This section explains the procedures used to analyze the data. These include descriptive statistical techniques, and item and content analysis.

Survey Questionnaire

Responses to the 90 IGI and 10 local goal statements were statistically analyzed using descriptive and inferential techniques including means, standard deviations, t tests, and rank order correlation coefficient tests. Relevant test results were tabulated and are presented in chapters 5 and 6.

Documents

Documents were subjected to content analysis using the following guidelines: (1) date of publication; (2) source of the data, i.e. author, institution or the professional authority attributed to the document; (3) author's choice of adjectival phrases used to qualify his or her goal beliefs, (e.g., important, very important, the most important role, of vital importance, an imperative need); (4) relationship of the documented goals to those identified in the IGI, i.e. their similarities or contextual uniqueness; and (5) frequency by which a particular goal was referred to or mentioned in the reviewed literature.

The above guidelines were applied as follows. Contents of documents were subjected to close examination. During the first review, documents were organized in chronological order and sub-divided into three categories: (1) documents published before or during the 1960s, (2) documents published in the 1970s, (3) documents published in the 1980s. The authors of each document were identified and assigned a status based on their relative social, political, institutional or legal influence. This step assisted in determining possible impact each document may have had on university goals.

During the second review cited goals were identified and highlighted with a marker and their numerical frequency, and similarity or uniqueness with the IGI goals, were established. The above steps were repeated several times until the researcher felt no new information could be obtained from the documents. Data identified through these processes were tabulated and are presented in chapter 7.

Interviews

Analysis of interview data involved three phases. The first phase followed immediately after each interview when the recorded conversation was replayed and specific settings, experiences and visual examples cited by interviewees or observed by the researcher were noted in the field log book. Where necessary, follow-up telephone conversations were placed to interviewees seeking further clarification of specific issues. This process helped maintain high mental recollection of the context and spirit of each interview

The second phase took place a few months following the field trip. This involved replays of recorded interviews during which the researcher took notes based on the following analytical categories: (1) type of goal and the interviewee's ranking out of five; (2) type of explanations given in support of a particular goal-ranking; (3) similarity or uniqueness of a given explanation to comments given by other interviewees relating to the same goal; (4) similarity or uniqueness of a given goal's associated problems with those of other interviewees' comments relating to the same goal; (5) similarity or uniqueness of the recommended solutions to other suggestions given for the same goal; (6) suggested areas of responsibility for problems or solutions --whether the suggested problem or solution should be addressed by institutions or the national government; and (7) numerical frequency of mentioned goals, particular problems or solutions.

The third phase involved careful study of transcribed notes to establish trends in the respondents' views.and draw possible generalizations from the data. The summary obtained from the analysis is available in chapter 8.

Summary

This chapter discussed the conceptual framework, instrumentation, data collection and analytical procedures of this study. It outlined the relationship between the study's analytical framework and the research methods and techniques. Data collection and analysis procedures were described to provide an audit trail for future researchers and serve as additional evidence of the study's validity.

A descriptive research design consisting of three techniques -- questionnaire survey, document analysis and semi-structured interview--guided this study. The questionnaire survey was the primary instrument for data collection while document analysis and semi-structured interviews provided supplementary information for data triangulation purposes.

As is the case in many research activities, data collection procedures were modified following feedback from pilot surveys. Among these were: 10 additional local goal statements used to supplement the main IGI instrument; arrangement of preliminary meetings with interviewees prior to interviews; and deletion of the request to respondents to Q sort the 20 IGI goals.

CHAPTER 5

RESPONSES TO IGI SURVEY

This chapter presents responses to the IGI survey. It compares respondents' perceptions of actual and preferred goals at their particular university and, by combining responses, for PNG as a whole. Goal perceptions of two sub-groups -- administrators and academics-- are compared.

Plan of Analysis

The plan of analysis and presentation of data in this chapter are illustrated in Figure 5.1 The column headed "goal focus" represents three constituent areas -- PNG as a whole, and the two universities--UPNG and PNGUT.

The columns under "respondents" represent constituent sub-groups -- total respondents, administrators and academics. The numbered boxes (1-18) represent "actual" and "preferred" responses of sub-groups from each constituent area. They serve as reference points and assist in identifying possible data sets necessary for group comparisons and discussions. The same numbers are used in subsequent tables where data relating to the same groups are discussed.

Using Figure 5.1 as a guide, this chapter is divided into four sections. Section one presents the total survey response (box 1 and 4, sub-problem #2) and responses from all administrators and all academics (box 2 with 3 and 5 with 6) (sub-problem # 4) to establish goal perspectives for PNG as a whole.

GOAL FOCUS	Respondents					
	All	Admin	Acad	All	Admin	Acad
PNG	1	2	3	4	5	6
UPNG	7	8	9	10	11	12
PNGUT	13	14	15	16	17	18
Actual				Preferred		

Figure 5.1

Plan for analysis of data in chapters 5 and 6.

Section two presents survey responses from UPNG. It begins with the total response from respondents at that university (box 7 and 10) (sub-problem #3) and compares the actual with the preferred responses, and then compares the actual and preferred responses of administrators and academics (box 8 with 9 and 11 with 12) (sub-problem # 4).

Similarly, section three presents responses from PNGUT, beginning with the total actual and preferred responses (13, 16) (sub-problem # 3), followed by responses from administrator and academic sub-groups (14 with 15 and 17 with 18) (sub-problem #4). Section four compares actual and preferred responses of respondents at UPNG (7, 10) with responses of respondents at PNGUT (13,16) and concludes with a summary of the findings.

A series of t-tests was used to determine statistical differences between goal means; and Spearman's (rho) rank order tests were applied to the rankings to determine statistically significant correlations between groups. Relevant test results are presented in Tables 5.1, 5.2, 5.6, 5.7, 5.11 and 5.12.

Goals for PNG Universities

This section presents the combined response of respondents in the study. As explained above, it is assumed that a combined response would produce an indication of goals for PNG as a whole. Tables 5.1 and 5.2 present the ratings and rankings of PNG respondents. These tables reveal the relative importance of each goal, and therefore individual goals can be examined. For example democratic governance (See Table 5.1 column 1) is rated as 2.98, a mere 0.03 points below advanced training (3.01), which represents the mid-range on the five-point scale. Statistically significant differences in paired comparisons are indicated at the $P \leq .05$ and $P \leq .005$ levels. For example, for each goal, the ratings of goals by administrators exceeded those by academics. For the purpose of further analysis a focus will be placed on the top and bottom five goals for each group.

Table 5.1

Actual and Preferred Goal Ratings for PNG Universities

	Actual						Preferred						
Goal Area	1 All N=183 Mean	SD	2 Admin N=51 Mean	SD	3 Acad N=132 Mean	SD	4 All N=183 Mean	SD	5 Admin N=51 Mean	SD	6 Acad N=132 Mean	SD	Prob *P≤.05 **P≤.005
Academic Dev.	3.22	.62	3.43	.59	3.15	.61	3.91	.55	3.97	.56	3.88	.55	1-4** 2-3**
Intell. Orientation.	2.96	.71	3.06	.69	2.91	.75	4.29	.51	4.15	.51	4.33	.50	1-4** 5-6*
Ind.Personal Dev.	2.71	.71	2.84	.69	2.66	.71	3.73	.73	3.77	.73	3.72	.74	1-4**
Humanism/ Alt.	2.21	.77	2.31	.86	2.18	.74	3.20	.90	3.27	.88	3.19	.91	1-4**
Cult .Esth. Aware'ss	1.95	.66	1.98	.75	1.91	.63	2.61	.84	2.71	.81	2.59	.85	1-4**
Trad. Religiousness	1.53	.63	1.63	.65	1.47	.61	1.80	.87	2.29	.99	1.62	.74	1-4** 5-6**
Vocational Prep.	2.93	.63	2.93	.65	2.91	.63	3.70	.64	3.76	.63	3.68	.64	1-4**
Advanced Training	3.01	.74	3.32	.76	2.87	.70	3.73	.72	3.97	.70	3.63	.71	1-4** 2-3** 5-6**
Research	2.87	.73	2.91	.61	2.86	.78	3.67	.79	3.60	.69	3.70	.82	1-4**
Meeting Local Needs	2.76	.65	2.87	.65	2.71	.65	3.57	.65	3.64	.56	3.55	.68	1-4**
Public Service	2.71	.72	2.93	.68	2.63	.71	3.76	.72	3.81	.75	3.75	.69	1-4** 2-3**
Social Egalitarianism	2.43	.69	2.57	.61	2.39	.71	3.14	.88	3.22	.78	3.13	.90	1-4**
Social Crit. Activism	2.51	.72	2.64	.67	2.48	.75	3.49	.79	3.40	.78	3.53	.81	1-4**
Freedom	2.87	.76	2.84	.79	2.89	.75	3.31	.89	3.07	.88	3.38	.88	1-4** 5-6*
Democ. Govern	2.98	.75	3.12	.79	2.93	.72	3.59	.76	3.47	.81	3.63	.75	1-4**
Community	3.17	.73	3.42	.73	3.08	.71	4.10	.59	4.10	.64	4.09	.58	1-4** 2-3**
Intell. Aesth. Environment	2.78	.69	2.99	.67	2.69	.69	3.87	.63	3.77	.69	3.91	.60	1-4** 2-3**
Off Campus Learning	2.12	.68	2.37	.69	2.01	.65	2.83	.75	3.08	.73	2.72	.75	1-4** 2-3** 5-6**
Acount./Effic.	3.10	.75	3.26	.78	3.04	.78	3.75	.67	[illegible]	.66	3.68	.67	1-4** 5-6*
Innovation	2.71	.74	3.04	.70	2.57	.72	3.66	.69	3.69	.62	3.65	.72	1-4** 2-3**

Table 5.2

Actual and Preferred Goal Rankings for PNG Universities

Goal Area	Actual			Preferred		
	1 All N=183	2 Admin N=51	3 Acad N=132	4 All N=183	5 Admin N=51	6 Acad N=132
Academic. Dev.	1	1	1	3	3.5	4
Intellectual Orient'n.	6	6	5.5	1	1	1
Indiv. Personal Dev.	13	13.5	12	7.5	7.5	6
Humanism/Altruism.	18	18	17	16	15	16
Cult. Aesth. Awareness	19	19	19	19	19	19
Trad. Religiousness	20	20	20	20	20	20
Voc. Preparation	7	9.5	5.5	9	9	8.5
Advanced Training	4	3	8	7.5	3.5	11.5
Research	8.5	11	9	10	12	7
Meeting Local needs	11	12	10	13	11	13
Public Service	13	9.5	13	5	6	5
Social Egalitarianism	16	16	15	17	16	17
Social Crit. Activism	15	15	16	14	14	14
Freedom	8.5	13.5	7	15	17	15
Democratic Governance	5	5	4	12	13	11.5
Community	2	2	2	2	2	2
Int. Aesth. Environment	10	8	11	4	7.5	3
Off Campus Learning	17	17	18	18	18	18
Account./ Efficiency	3	4	3	6	5	8.5
Innovation	13	7	14	11	10	10

Spearman's rank order correlation coefficient for the groups are :1and 4 =[illegible]7 (P=.000); 2 and 3=.86 (P=.000); 5 and 6 =.87 (P=.000); UPNG and PNGUT = .88 (P=.000), and .87 (P=.000).

All Respondents

Table 5.2 displays the actual and preferred goal rankings for PNG as whole. The data may be highlighted by selecting the top five and bottom five goals from each list (See Table 5.3).

Table 5.3

Top and Bottom Actual and Preferred Goals for PNG

	Actual	**Preferred**
Top	Academic Development (3.2)	Intellectual Orientation (4.3)
	Community (3.2)	Community (4.1)
	Accountability/Efficiency (3.1)	Academic Development (3.9)
	Advanced Training (3.0)	Intell. Aesth. Environment (3.9)
	Democratic Governance (3.0)	Public Service (3.8)
Bottom	Social Egalitarianism (2.1)	Humanism/ Altruism (3.2)
	Off-campus Learning (2.1)	Social Egalitarianism (3.1)
	Humanism/ Altruism (2.2)	Off-campus Learning (2.8)
	Cult. Aesth. Awareness (2.0)	Cult. Aesth. Awareness (2.6)
	Traditional Religiousness (1.5)	Traditional Religiousness (1.8)

There is a high degree of similarity between actual and preferred goals for PNG, especially among the bottom rated goals. However only academic development and community occur as top rated actual and preferred goals. Also noticeable is that preferred goals have higher ratings than actual goals. Since the goals were rated on a 5- point scale, it can be seen that the top five actual goals just surpass the mid-point of the scale; whereas the top five preferred goals fall around the "important" range.

The bottom five actual goals are around the low importance mark, but approximate the mid-point of the scale as preferred goals. These observations were confirmed by statistical tests, viz:

1. There is a statistically significant correlation (0.77, P=.000) between actual and preferred rankings, indicating that the relative order remains the same.

2. All paired comparisons of actual and preferred goal ratings showed statistically significant differences, with preferred greater than actual ($P \leq .005$).

Administrators and Academics

Table 5.2 also displays the actual and preferred goal rankings of administrators and academics. The top and bottom actual goals for administrators and academics are presented in table 5.4.

Table 5.4

Top and Bottom Actual Goals for Administrators and Academics at PNG

	Administrators	Academics
Top	Academic Development (3.4)	Academic development (3.2)
	Community (3.4)	Community (3.1)
	Advanced Training (3.3)	Accountability / Efficiency (3.0)
	Accountability /Efficiency (3.3)	Democratic Governance (2.9)
	Democratic Governance (3.1)	Intellectual Orientation (2.9)
Bottom	Social Egalitarianism (2.6)	Social Criticism/ Activism (2.5)
	Off-campus Learning (2.4)	Humanism/ Altruism (2.2)
	Humanism / Altruism (2.3)	Off-campus Learning (2.0)
	Cult. Aesthetic Awareness (2.0)	Cult. Aesthetic Awareness (1.9)
	Traditional Religiousness (1.6)	Traditional Religiousness (1.5)

A high degree of similarity is evident between the administrators' and academics' actual goal rankings for PNG, especially for the top two goals--academic development and community-- and among the bottom rated goals. Also noticeable, is that administrators' ratings are higher than academics'. These observations were confirmed by statistical tests viz:

(1) There is a statistically significant correlation (.86, P= .000) between the groups' actual goal rankings.

(2) There are statistically significant differences ($P \leq .005$) in the groups' actual goal ratings for academic development, advanced training, public service, community, off-

campus learning and innovation. Administrators' ratings for each goal were higher than academics' ratings.

Table 5.5 presents the top and bottom preferred goals of administrators and academics at PNG.

Table 5.5

Top and Bottom Preferred Goals for Administrators and Academics at PNG

	Administrators	**Academics**
Top	Intellectual Orientation (4.1)	Intellectual Orientation (4.3)
	Community (4.1)	Community (4.1)
	Academic Development (4.0)	Intell. Aesth. Environment (3.9)
	Advanced Training (4.0)	Academic Development (3.9)
	Accountability /Efficiency (3.9)	Public Service (3.6)
Bottom	Social Egalitarianism (3.2)	Humanism/Altruism (3.2)
	Freedom (3.1)	Social Egalitarianism (3.1)
	Off-campus Learning (3.1)	Off-campus Learning (2.7)
	Cult. Aesth. Awareness (2.7)	Cult. Aesth. Awareness (2.6)
	Traditional Religiousness (2.3)	Traditional Religiousness (1.6)

A high degree of similarity is evident from Table 5.5 in the administrators' and academics' preferred goal rankings particularly among 3 of the top five and bottom four goals. Also noticeable are the academics' rating of intellectual orientation and administrators' rating of traditional religiousness. Academics' ratings of intellectual orientation is higher than that of administrators. This is not surprising, given the interrelationship between academic pursuits and intellectual orientation of academic staff. On the other hand, administrators' ratings of traditional religiousness is higher than the academics.

The above observations reflect statistical test results which indicate that:

(1) There is a statistically high correlation (.87, P= .000) between the administrators and academics preferred goal rankings;

(2) There are statistically significant differences (P ≤ .05) between administrators' and academics' ratings of intellectual orientation, traditional religiousness, advanced training, freedom, off-campus learning and accountability/efficiency (See Table 5.1). Administrators ratings of traditional religiousness, advanced training, off-campus learning and accountability/efficiency were significantly higher than the academics ratings, while academics' rating of intellectual orientation and freedom were higher than those of administrators.

Goals for UPNG

This section presents responses from UPNG. It begins with the total response from respondents as a whole then compares responses of administrators with responses of academics. Tables 5.6 and 5.7 present the goal ratings and rankings for UPNG.

Table 5.6

Actual and Preferred Goals Ratings for UPNG

	Actual						Preferred						
	7 All N=114		8 Admin N=26		9 Acad N=[illegible]		10 All N=114		11 Admin N=26		12 Acad N=88		Prob *P≤.05 **P≤.005
Goal Area	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Acad. Dev.	3.27	.60	3.56	.58	3.18	.62	4.00	.55	4.12	.54	3.97	.55	7-10** 8-9**
Intell. Orient'n	2.94	.75	3.07	.74	2.90	.75	4.35	.51	4.24	.54	4.39	.49	7-10**
Ind. Person'l Dev.	2.67	.71	2.78	.70	2.64	.61	3.79	.73	3.82	.59	3.78	.87	7-10**
Humanism/ Altruism	2.25	.80	2.34	.85	2.23	.79	3.40	.89	3.49	.70	3.38	.94	7-10**
Cult. Aesth. Aware's	1.94	.60	1.98	.56	1.93	.62	2.79	.78	2.86	.58	2.77	.82	7-10**
Trad.Religiousness	1.48	.5[illegible]	1.64	.58	1.44	.57	1.82	.87	2.40	.88	1.65	.79	7-10** 11-12**
Vocational Prep.	2.82	.65	2.28	.56	2.82	.67	3.66	.68	3.66	.66	3.65	.69	7-10**
Advanced Training	2.93	.74	3.37	.65	2.81	.22	3.75	.73	4.10	.65	3.66	.73	7-10** 8-9** 11-12*
Research	2.91	.78	3.00	.66	2.89	.82	3.86	.75	3.81	.70	3.88	.77	7-10**
Meeting Local Needs	2.67	.68	2.78	.65	2.64	.69	3.61	.69	3.64	.57	3.60	.73	7-10**
Public Service	2.67	.74	2.96	.68	2.59	.73	3.87	.68	3.86	.76	3.87	.66	7-10** 8-9*
Social Egalitarianism	2.40	.80	2.54	.66	2.37	.73	3.23	.91	3.21	.71	3.24	.96	7-10**
Social Crit. Activism	2.60	.71	2.81	.60	2.55	.73	3.71	.68	3.62	.59	3.74	.70	7-10**
Freedom	3.06	.76	3.08	.78	3.10	.76	3.54	.83	3.27	.97	3.62	.78	7-10**
Democ. Governance	3.01	.73	3.10	.69	2.98	.74	3.66	.77	3.58	.86	3.68	.75	7-10**
Community	3.19	.73	3.52	.66	3.10	.73	4.17	.58	4.18	.62	4.16	.57	7-10** 8-9**
Intell. Aesth. Environ't	2.73	.73	2.98	.72	2.65	.72	3.99	.63	3.92	.63	4.00	.63	7-10** 8-9*
Off Campus Learning	2.08	.68	2.31	.76	2.01	.64	2.89	.84	3.08	.78	2.83	.7[illegible]	7-10** 8-9*
Account/ Efficiency	3.07	.78	3.24	.68	3.02	.80	3.76	.73	3.95	.77	3.70	.71	7-10**
Innovation	2.66	.66	3.09	.69	2.53	.77	3.74	.71	3.75	.64	3.73	.74	7-10** 8-9**

Table 5.7

Actual and Preferred Goal Rankings for UPNG

Goal Area	Actual			Preferred		
	7 All N=114	8 Admin N=26	9 Acad N=88	10 All N=114	11 Admin N=26	12 Acad N=88
Academic. Dev.	1	1	1	3	3	4
Intellectual Orient'n .	6	8	6	1	1	1
Ind. Personal Dev	13	13.5	11.5	7	8	7
Humanism/Altruism.	17	17	17	16	15	16
Cult. Aesth. Awareness	19	19	19	19	19	19
Trad. Religiousness	20	20	20	20	20	20
Voc. Preparation	9	12	8	12.5	11	13
Advanced Training	7	3	9	9	4	12
Research	8	9	7	6	9	5
Meeting Local Needs	13	13.5	11.5	14	12	15
Public Service	13	11	13	5	7	6
Social Egalitarianism	16	16	16	17	17	17
Social Crit. Activism	15	15	14	11	13	8
Freedom	4	7	2.5	15	16	14
Democratic Governance	5	5	5	12.5	14	11
Community	2	2	2.5	2	2	2
Int. Aesth. Environment	10	10	10	4	6	3
Off Campus Learning	18	18	18	18	18	18
Account./ Efficiency	3	4	4	8	5	10
Innovation	14	6	15	10	10	9

Spearman's rank order correlation coefficient for the groups are :
7and 10 =.71 (P=.000); 8 and 9=.78 (P=.000); 11 and 12 =.88 (P=.000).

All Respondents

The data are highlighted by selecting the top and bottom five goals from each list (See Table 5.8).

Table 5.8

Top and Bottom Actual and Preferred Goals for UPNG

	Actual	**Preferred**
Top	Academic Development (3.3)	Intellectual Orientation (4.4)
	Community (3.2)	Community (4.2)
	Accountability/ Efficiency (3.1)	Academic Development (4.0)
	Freedom (3.1)	Int. Aesth. Environment (4.0)
	Democratic Governance (3.0)	Public Service (3.9)
Bottom	Social Egalitarianism (2.4)	Humanism/ Altruism (3.4)
	Humanism/ Altruism (2.3)	Social Egalitarianism (3.2)
	Off-campus Learning (2.1)	Off-campus Learning (2.9)
	Cult. Aesthetic Awareness (1.9)	Cult. Aesth. Awareness (2.8)
	Traditional Religiousness (1.50)	Traditional Religiousness (1.8)

Table 5.8 suggest some similarity in the actual and preferred goal rankings especially among the bottom ranked goals. Also evident is the placing of community and academic development in the top five of both the actual and preferred rankings. Of note is the fact that intellectual orientation, intellectual aesthetic environment, and public service enter the top list of preferred goals. This suggests a preference towards more traditional liberal education. Further attention is drawn to the difference in the ratings with the

"preferred" exceeding the "actual." One observation which may disturb some is the absence of freedom and democratic governance from the top preferred goals. Does this mean that respondents do not believe them to be as important for universities in the future? Do respondents see them as being over-emphasized in UPNG?

Statistical test results indicate: (1) a statistically high correlation (.71, P=.000) between actual and preferred rankings; (2) there are statistically significant differences (P≤.005) between the actual and preferred ratings of all goals.

Administrators and Academics.

Tables 5.6 and 5.7 also present the actual and preferred ratings and rankings of administrators and academics at UPNG. The top and bottom actual goals of administrators are presented in table 5.9.

Table 5.9

Top and Bottom Actual Goals of Administrators and Academics at UPNG

	Administrators	**Academics**
Top	Academic Development (3.6)	Academic Development (3.2)
	Community (3.5)	Community (3.1)
	Advanced Training (3.4)	Freedom (3.1)
	Accountability/Efficiency (3.2)	Accountability/ Efficiency (3.0)
	Democratic Governance (3.1)	Democratic Governance (3.0)
Bottom	Social Egalitarianism (2.5)	Social Egalitarianism (2.4)
	Humanism/ Altruism (2.3)	Humanism/Altruism (2.2)
	Off-campus Learning (2.3)	Off-campus Learning (2.0)
	Cult. Aesth. Awareness (1.6)	Cult. Aesthetic Awareness (1.9)
	Traditional Religiousness (1.6)	Traditional Religiousness (1.4)

There is a high similarity between the administrators' and academics' goal rankings especially among the top two goals and the bottom five goals. Differences are also evident in the groups' goal ratings where the ratings for administrators are generally higher. It is interesting to note that freedom is among the top five actual goals for academics. Statistical test results confirm some of these observations. They show that:

(1) There is a high statistical correlation (.78, P=.000) between academics' and administrators' actual goal rankings;

(2) Statistically significant (P≤.005) differences are evident in the groups ratings of academic development, advanced training, public service, community, intellectual aesthetic

environment, off-campus learning, and innovation (See Table 5.6). In every case the ratings for administrators were higher than the ratings of academics.

Tables 5.7 and 5.8 also reveal the preferred rankings and ratings of administrators and academics at UPNG. The top and bottom preferred goals are presented in table 5.10.

Table 5.10

Top and Bottom Preferred Goals of Administrators and Academics at UPNG

	Administrators	Academics
Top	Intellectual Orientation (4.2)	Intellectual Orientation (4.4)
	Community (4.2)	Community (4.2)
	Academic Development (4.1)	Intell. Aesth. Environment (4.0)
	Advanced Training (4.1)	Academic Development (4.0)
	Accountability/ Efficiency (4.0)	Research (3.9)
Bottom	Freedom (3.3)	Humanism/ Altruism (3.4)
	Social Egalitarianism (3.2)	Social Egalitarianism (3.2)
	Off-campus Learning (3.1)	Off-campus Learning (2.8)
	Cult. Aesth. Awareness (2.9)	Cult. Aesth. Awareness (2.8)
	Traditional Religiousness (2.4)	Traditional Religiousness (1.7)

There is a high similarity in rankings of administrators and academics particularly among the top three of five goals and the bottom four goals. Also obvious is the high rating of intellectual orientation by academics. Another interesting observation is the high ranking of research by academics at UPNG-- a goal which has not emerged previously in rating of intellectual orientation by academics. Another interesting observation is the high ranking of research by academics at UPNG-- a goal which has not emerged previously in the top five. Further attention is drawn to the concentration in the top rankings of academic and intellectually oriented goals by both groups, especially by academics. Similarities in goal ratings are also evident for community and social egalitarianism. By comparing tables 5.9 and 5.10, it is noted that, except for democratic governance and intellectual orientation, the administrators top preferred goals are the same as their actual goals. But one notices that academics included freedom, democratic governance, and accountability/efficiency in their top five actual goals, but not in their top five preferred. Do academics see better times ahead (economically or otherwise) where they do not have to defend academic freedom and insist on democratic government in the universities?

Statistical test results show that:

(1) there is a high correlation (.88, P=.000) between the groups' ranking;

(2) statistically significant differences (P≤ .05) were evident in the groups ratings for only two goals--traditional religiousness and advanced training (See table 5.6).

Goals for PNGUT

This section presents the questionnaire responses of PNGUT respondents. Tables 5.11 and 5.12 show the actual and preferred ratings and rankings of respondents.

Table 5.11

Actual and Preferred Goal Ratings for PNGUT

	Actual						Preferred						
	13 All N=68		14 Admin N=25		15 Acad. N=43		16 All N=68		17 Admin N=25		18 Acad N=43		Prob *P≤.05 **P≤.005
Goal Area	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Acad. Dev.	3.16	.58	3.30	.58	3.09	.56	3.76	.52	3.82	.55	3.72	.51	13-16**
Intell. Orient'n	3.00	.71	3.06	.67	2.97	.74	4.18	.50	4.05	.49	4.23	.51	13-16**
Ind. Person'l Dev.	2.76	.71	2.91	.71	2.70	.71	3.65	.74	3.72	.87	3.62	.68	13-16**
Humanism/ Altruism	2.15	.74	2.29	.90	2.09	.64	2.89	.84	3.04	1.01	2.81	.74	13-16**
Cult. Aesth. Aware's	1.88	.77	1.98	[illegible]	1.84	.67	2.31	.87	2.55	.99	2.20	.78	13-16**
Trad.Religiousness	1.54	.71	1.67	.75	1.51	.69	1.78	.88	2.10	1.12	1.55	.64	13-16** 17-18*
Vocational Prep.	3.05	.59	3.05	.72	3.06	.52	3.75	.55	3.87	.59	3.70	.52	13-16**
Advanced Training	3.08	.75	3.27	.89	2.96	.66	3.65	.71	3.85	.74	3.54	.69	13-16**
Research	2.81	.65	2.83	.57	[illegible]	.70	3.37	.76	3.39	.63	3.37	.84	13-16**
Meeting Local Needs	2.90	.57	2.97	.66	2.87	.53	3.50	.57	3.63	.57	3.43	.58	13-16**
Public, Service	2.76	.69	2.90	.70	2.73	.67	3.58	.73	3.77	.76	3.50	.69	13-16**
Social Egalitarianism	2.47	.65	2.62	.56	2.43	.67	2.99	.81	3.23	.87	2.90	.73	13-16**
Social Crit. Activism	2.39	.74	2.47	.71	2.36	.73	3.12	.84	3.17	.90	3.08	.84	13-16**
Freedom	2.58	.72	2.61	.74	2.56	.73	2.90	.84	2.87	.75	2.89	.88	13-16**
Democ. Governance	2.96	.78	3.14	.91	2.86	.90	3.48	.75	3.37	.77	3.52	.75	13-16**
Community	3.17	.72	3.33	.81	3.10	.67	3.96	.60	4.02	.67	3.92	.56	13-16**
Intell. Aesth. Environ't	2.83	.65	3.08	.63	2.74	.65	3.68	.61	3.61	.74	3.73	.51	13-16**
Off Campus Learning	2.12	.69	2.43	.63	1.95	.68	2.71	.78	3.08	[illegible]	[illegible]	.78	13-16** 14-15** 17-18**
Accoun't/ Efficiency	3.15	.72	3.28	.67	3.10	.75	3.73	.57	3.89	.54	3.62	.58	13-16**
Innovation	2.74	.68	3.01	.73	2.59	.62	3.53	.62	3.64	.61	3.48	[illegible]	13-16** 14-15*

Table 5.12

Actual and Preferred Goal Rankings for PNGUT

	Actual			Preferred		
Goal Area	13 All N=68	14 Admin N=25	15 Acad N=43	16 All N=68	17 Admin N=25	18 Acad N=43
Academic Dev.	2	2	3	3	6	4
Intell. Orient'n.	6	6	5	1	1	1
Ind. Personal Dev	11.5	11	12	8	8	6.5
Humanism/Altruism.	17	18	17	17	17	17
Cult. Aesth. Awareness	19	19	19	19	19	19
Trad. Religiousness	20	20	20	20	20	20
Voc. Preparation	5	7	4	4	4	5
Advanced Training	4	4	6	7	5	8
Research	10	13	9	13	12	13
Meeting Local needs	8	10	7	11	10	12
Public Service	11.5	12	11	8	7	10
Social Egalitarianism	15	14	15	15	14	15
Social Crit. Activism	16	16	16	14	15	14
Freedom	14	15	14	16	18	16
Democratic Governance	7	5	8	12	13	8
Community	1	1	1.5	2	2	2
Int. Aesth. Environment	9	9	10	6	11	3
Off Campus Learning	18	17	18	18	16	18
Account./ Efficiency	3	3	1.5	5	3	6.5
Innovation	13	8	13	10	9	11

Spearman's rank order correlation coefficient for the groups are :
13 and 16 =.89 (P=.000); 14 and 15=.89 (P=.000); 17 and 18 =.90 (P=.000).

All Respondents

The rankings and ratings of all PNGUT respondents are highlighted by selecting the top and bottom goals for each list. Table 5.13 displays the top actual and preferred goals for PNGUT.

Table 5.13

Top and Bottom Actual and Preferred Goals for PNGUT

	Actual	**Preferred**
Top	Community (3.2)	Intellectual Orientation (4.2)
	Academic Development (3.2)	Community (4.0)
	Accountability/Efficiency (3.2)	Academic Development (3.8)
	Advanced Training (3.1)	Vocational Preparation (3.6)
	Vocational Preparation (3.1)	Accountability/ Efficiency (3.7)
Bottom	Social Criticism/Activism (2.4)	Freedom (2.9)
	Humanism/Altruism (2.2)	Humanism/Altruism (2.9)
	Off-campus Learning (2.1)	Off-campus Learning (2.7)
	Cult. Aesth. Awareness (1.9)	Cult. Aesth. Awareness (2.3)
	Traditional Religiousness (1.5)	Traditional Religiousness (1.8)

Two primary observations are offered on data in table 5.13. There is a high similarity in the actual and preferred goal ranking especially in the top and bottom goals. Secondly the ratings for "preferred" are generally higher than that for "actual." It is also interesting to note that intellectual orientation which was absent in the top rankings for "actual" received a very high ranking for "preferred." Another interesting observation is the absence of advanced training among the top preferred ranks. Do these preferences indicate a desire to be less technically oriented? One also notes the presence of freedom among the bottom rankings. One wonders how intellectual orientation can flourish without freedom? Perhaps freedom is not an issue and therefore can be taken for granted.

Statistical tests confirm the first two observations. Results indicate that: (1) there is a high correlation (.89, P=.000) between the actual and preferred rankings; (2) statistically significant ($P \leq .005$) differences exist between the respondents' actual and preferred ratings.

Administrators and Academics

Tables 5.11 and 5.12 also present the rankings and ratings of administrators and academics at PNGUT. The top and bottom actual goals for administrators and academics are presented in table 5.14.

Table 5.14

Top and Bottom Actual Goals for Administrators and Academics at PNGUT

	Administrators	Academics
Top	Community (3.3)	Community (3.1)
	Academic Development (3.3)	Accountability/Efficiency (3.1)
	Accountability/Efficiency (3.3)	Academic development (3.1)
	Advanced Training (3.3)	Vocational Preparation (3.1)
	Democratic Governance (3.1)	Intellectual Orientation (3.0)
Bottom	Social Criticism/Activism (2.5)	Social Criticism/Activism (2.4)
	Off-campus Learning (2.4)	Humanism/ Altruism (2.1)
	Humanism/ Altruism (2.3)	Off-campus learning (2.0)
	Cult. Aesth. Awareness (2.0)	Cult. Aesth. Awareness (1.8)
	Traditional Religiousness (1.7)	Traditional Religiousness (1.5)

At least two observations are evident from the data. There is a high similarity in the groups' actual goal rankings particularly the top three goals and the last five goals. The ratings also suggest a similarity in the groups' ratings. The top goal ratings of both groups are lodged in the "medium importance" range. One also notes similarity in the bottom goal ratings, - -in the "low importance" rating scale.

The absence of vocational preparation from the top actual goals of administrators is an interesting observation, given the fact that the basic premise for this institution is to prepare students for industry and the professions.

Statistical test results indicate that: (1) there is a high correlation (.89, P=.000) between the groups rankings; (2) statistical differences (P <.05) in the groups' ratings are evident only for off-campus learning and innovation.

Tables 5.12 and 5.13 also reveal the preferred rankings and ratings for administrators and academics at PNGUT. Table 5.15 highlights the top and bottom preferred goals of administrators and academics at PNGUT.

Table 5.15

Top and Bottom Preferred Goals of Administrators and Academics at PNGUT

	Administrators	**Academics**
Top	Intellectual Orientation (4.1)	Intellectual Orientation (4.2)
	Community (4.0)	Community (3.9)
	Accountability/Efficiency (3.9)	Int. Aesth. Environment (3.7)
	Vocational Preparation (3.9)	Academic Development (3.7)
	Advanced Training (3.9)	Vocational Preparation (3.7)
Bottom	Off-campus Learning (3.1)	Freedom (2.9)
	Humanism/Altruism (3.0)	Humanism/Altruism (2.8)
	Freedom (2.9)	Off-campus Learning (2.5)
	Cult. Aesth. Awareness (2.6)	Cult. Aesth. Awareness (2.2)
	Traditional Religiousness (2.2)	Traditional Religiousness (1.6)

There is a high similarity in the goal rankings of administrators and academics especially among the bottom ranked goals. There is, however, some evidence of differences in the groups' top rankings. Administrators appear to emphasize accountability/efficiency and advanced training whereas academics prefer academic development and intellectual aesthetic environment. Also evident among the bottom goals are the differences in ratings for off-campus learning and traditional religiousness. A further point for noting is the presence of freedom among the bottom ranked goals by both groups. This observation appears to question the traditional relationship placed on academic and intellectual freedom espoused by university institutions.

One notes that both groups have included in their top preferred ranking the goal of vocational preparation.

The results of statistical tests conducted on the rankings and ratings indicated high correlation results, (.90, P=.00) for the rankings and statistically significant differences in the ratings of administrators and academics for traditional religiousness and off-campus learning (See Table 5.11).

Comparison of UPNG and PNGUT Goals

This section compares the total UPNG and PNGUT respondents' actual and preferred rankings and ratings. UPNG responses are presented in Tables 5.6 and 5.7 columns 7 and 10 and PNGUT respondent responses are presented in Tables 5.11 and 5.12, columns 13 and 16. Analysis of the two universities' goals will be based on the top and bottom actual and preferred rankings as well as the results of statistical tests. The top and bottom actual goals of UPNG and PNGUT are presented in table 5.16.

Table 5.16

Top and Bottom Actual Goals of UPNG and PNGUT

	UPNG	PNGUT
Top	Academic Development (3.3)	Community (3.2)
	Community (3.2)	Academic Development (3.2)
	Accountability/Efficiency (3.1)	Accountability/Efficiency (3.2)
	Freedom (3.1)	Advanced Training (3.1)
	Democratic Governance (3.0)	Vocational Preparation (3.1)
Bottom	Social Egalitarianism (2.4)	Social Criticism/Activism (2.4)
	Humanism/Altruism (2.3)	Humanism/Altruism (2.2)
	Off-campus Learning (2.1)	Off-campus Learning (2.1)
	Cult. Aesth. Awareness (1.9)	Cult. Aesth. Awareness (1.9)
	Traditional religiousness (1.5)	Traditional Religiousness (1.5)

Two primary observations are offered from data in table 5.16. There is a high similarity in the goal rankings of respondents at UPNG and PNGUT, especially among the top three goals and the bottom four goals. The same observation is offered for the groups' ratings. Also evident are differences in the two universities' top goals. UPNG respondents chose freedom and democratic governance as opposed to PNGUT respondents' choice of advanced training and vocational preparation.

These observations are supported by statistical tests which show (1) a high correlation (.88, P=.000) between the universities actual goal rankings and (2) statistically significant differences between the two universities' ratings of vocational preparation, meeting local needs, social criticism/activism and freedom. PNGUT respondents perceived two goals --vocational preparation and meeting local needs --of higher importance at their university than did UPNG respondents. The latter perceived social criticism/activism and freedom to be of higher importance at their university. These findings generally support the distinction between UPNG as a general university and PNGUT with a technological emphasis.

Table 5.17 presents the top and bottom preferred goals of respondents at UPNG and PNGUT.

Table 5.17

Top and Bottom Preferred Goals of UPNG and PNGUT

	UPNG	**PNGUT**
Top	Intellectual Orientation (4.4)	Intellectual Orientation (4.2)
	Community (4.2)	Community (4.0)
	Academic Development (4.0)	Academic Development (3.8)
	Int. Aesth. Environment (4.0)	Vocational Preparation (3.8)
	Public Service (3.9)	Accountability/Efficiency (3.7)
Bottom	Humanism/Altruism (3.4)	Freedom (2.9)
	Social Egalitarianism (3.2)	Humanism/Altruism (2.9)
	Off-campus Learning (2.9)	Off-campus Learning (2.7)
	Cult. Aesth. Awareness (2.8)	Cult. Aesth. Awareness (2.3)
	Traditional Religiousness (1.8)	Traditional Religiousness (1.8)

There is a high similarity in the preferred rankings of the two universities, especially the top three and four of the bottom goals. Also obvious is the higher ratings of UPNG respondents compared to their counterparts at PNGUT. Another interesting observation is the presence of freedom among the bottom rank goals of PNGUT suggesting that it is of low importance in that university.

Statistical comparison of the institutions' preferred ranking indicated high correlation of .87 (P=.000). Significant differences were noted between UPNG respondents and PNGUT respondents for 10 preferred goals--academic development, intellectual orientation, humanism/ altruism, cultural aesthetic awareness, research, public service, social criticism/activism, freedom, community and intellectual aesthetic environment. Respondents at UPNG rated eight of the above preferred goals higher than did PNGUT respondents. The latter perceived vocational preparation and public service of higher importance at their university than did respondents at UPNG.

It appeared that PNGUT respondents were more concerned about the task at hand rather than the future. Further, respondents at PNGUT placed greater importance on vocational-oriented training than did respondents at UPNG.

This difference seems to confirm one of the basic differences between the institutions as recommended by the Commission on Higher Education (1964), that "the Institute of Higher Technical Education focus on technical and professional programs in various branches of engineering, commercial and management professions" (p.93). The data suggest that vocational preparation has remained as an important goal at PNGUT since its initial emphasis by the Commission on Higher Education. However, the fact that advanced training appears in the top five actual goals, but drops in importance in preferred goal is puzzling.

Summary

This chapter contain data on respondents' perceptions of 20 IGI goals for PNG universities. The chapter (1) highlighted the total respondent goal perception for PNG, UPNG, and PNGUT, (2) revealed the actual and preferred goal perceptions of administrators and academics as a combined group and as subgroups in their particular university, (3) established some similarities and differences in goal rankings and perceptions between the related subgroups, and noted questions about the similarities and differences. While attempts were made to explain some of the differences in goal perceptions between various groups these are more speculative than factual due to limited data. These speculations will be returned to in the last chapter and they can be considered in the light of data from other sources. A summary of findings from the survey follows.

PNG Universities

(A) The rankings of goals for PNG respondents were similar for actual and preferred but respondents' ratings varied significantly between actual and preferred goals, implying that respondents perceive the goals to be under-emphasized and prefer that they be further emphasized.

(B) Academic development, community, accountability/efficiency, advanced training, democratic governance, intellectual orientation, intellectual aesthetic environment and public service are among the top rated actual and preferred goals for PNG. Among the lowest rated goals are traditional religiousness, cultural aesthetic awareness, humanism/altruism, off-campus learning and social egalitarianism.

(C) Goal rankings for administrators and academics in PNG are similar but administrators generally gave higher ratings than did academics. Academics, however, gave higher preferred ratings for intellectual orientation and freedom than did administrators.

UPNG

(A) The ranking of goals for UPNG respondents were similar for actual and preferred goals but ratings varied. Respondents perceive most goals to be under-emphasized and prefer that they be given more emphasis in the future.

(B) The top rated goals for UPNG are academic development, community, accountability/efficiency, freedom, intellectual orientation, intellectual aesthetic environment, and public service. The bottom rated goals for UPNG are traditional religiousness, cultural aesthetic awareness, off-campus learning, humanism/altruism, and social egalitarianism.

(C) Goal rankings for administrators and academics in UPNG are similar but administrators generally gave higher ratings than did academics.

PNGUT

(A) The ranking of goals for PNGUT respondents were similar for actual and preferred goals but ratings varied. Respondents perceived most goals to be under-emphasized and prefer that they be given more emphasis.

(B) Community, intellectual orientation, academic development, advanced training, vocational preparation and accountability/efficiency were among the top rated goals for PNGUT. Traditional religiousness, cultural aesthetic awareness, off-campus learning, humanism/altruism and freedom were among the lowest rated goal.

(C) The ranking of goals for administrators and academic at PNGUT were similar but their ratings varied significantly for traditional religiousness, off-campus learning and innovation. Administrators generally gave higher ratings than did academics.

UPNG versus PNGUT

(A) The rankings of both actual and preferred goals for UPNG and PNGUT were similar. However the ratings varied between the two institutions.

(B) Significant differences were noted between UPNG respondents and PNGUT respondents as follows:

(1) UPNG respondents perceived 10 preferred goals--academic development, intellectual orientation, humanism/ altruism, cultural aesthetic awareness, research, public service, social criticism/activism, freedom, community and intellectual aesthetic environment to be of higher preferred importance than did PNGUT respondents.

(2) PNGUT respondents perceived two actual goals--vocational preparation and meeting local needs , and one preferred goal, accountability/efficiency to be of higher importance at their university than did respondents at UPNG.

The data from the survey have suggested some trends for future consideration in this report.

CHAPTER 6

LOCAL SPECIFIC GOALS

This chapter presents responses to 10 local specific goal statements which address current issues in university education in PNG. Goal statements were developed following a review of literature on the country's university education, and identification of outstanding university issues.

Plan of Analysis

The data presentation plan for this chapter is similar to that used in chapter 5 (See Figure 5.1). Section one presents the total survey response and compares actual and preferred responses from all administrators and all academics, to establish goal perspectives for PNG as a whole.

Section two presents survey responses from UPNG. It begins with the total response from that university and compares the actual with the preferred responses, and then compares the actual and preferred responses of academics and administrators.

Section three presents responses from PNGUT beginning with the total actual and preferred responses, followed by responses from administrator and academic sub-groups.

Section four compares actual and preferred responses of respondents at UPNG with responses of respondents at PNGUT, and concludes with a summary of the findings.

T-tests and rank order tests were used to identify significant differences and correlations in respondents' goal ratings and rankings. Relevant results are presented in Tables 6.1, 6.2, 6.6, 6.7, 6.11 and 6.12

Specific Goals for PNG Universities

This section presents the total response to the ten specific goals. While respondents were asked to rate the goals as they relate to their particular university, it is assumed that a combined response would produce an indication for PNG as a whole. Tables 6.1 and 6.2 present the total ratings and rankings of PNG respondents. These tables reveal the relative importance of each goal and therefore individual goals can be examined.

All Respondents

Table 6.3 presents the top and bottom actual and preferred local specific goals for PNG. Dotted lines in the table show the top goals with equal ratings. There is a high similarity between the actual and preferred goal rankings especially among the top three goals and the bottom goals. However, there are obvious differences as well. Of particular note are, "revision of university priorities in cooperation with the Committee on University Trained Manpower (CUTM) guidelines," and "encouragement of PNG women to obtain university education." The latter goal moved from among the bottom five ranking for "actual " to the top five ranking for "preferred," while the former goal dropped from the top five for "actual" to the bottom five for "preferred" rankings, despite the relatively higher rating. Also obvious is the higher ratings for "preferred" over "actual."

Table 6.1

Actual and Preferred Ratings of Local Specific Goals for PNG Universities

	Actual						Preferred						
Local Specific Goal Statements	1 All N=(186) Mean	SD	2 Admin N=(32) Mean	SD	3 Acad N=(132) Mean	SD	4 All N=(186) Mean	SD	5 Admin N=(32) Mean	SD	6 Acad N=(132) Mean	SD	Prob *P≤.05 **P≤.005
To review university priorities / programs in cooperation with CUTM[1] guidelines.	3.12	1.07	3.43	1.01	3.00	1.07	3.50	1.26	4.00	1.08	3.31	1.26	1-4** 2-3* 5-6**
To adapt and modify teaching methods to Papua New Guinean learning styles.	3.02	1.13	3.29	.95	2.92	1.04	4.08	.06	4.10	.68	4.06	.97	1-4** 2-3*
To cooperate with CHE[2] in planning higher education in PNG.	3.48	.07	3.85	.77	3.33	.96	4.26	.74	4.51	.55	4.16	.77	1-4** 2-3** 5-6**
To provide inservice education/ training for teachers/ instructors.	3.11	1.07	3.41	1.16	2.99	1.05	3.87	1.00	4.03	1.02	3.80	1.02	1-4** 2-3*
To train national staff for universities in PNG.	3.74	.92	3.84	.86	3.71	.97	4.34	.80	4.46	.60	4.30	.80	1-4** 5-6*
To develop joint university programs with UPNG or PNGUT.	2.64	1.08	3.12	1.16	2.44	1.02	3.70	1.16	4.10	.69	3.56	1.19	1-4** 2-3** 5-6**
To encourage PNG women to obtain university education.	3.11	.96	3.37	1.07	3.01	.95	4.12	.88	4.10	.89	4.14	.90	1-4** 2-3*
To establish a single salary/working condition for university staff.	3.27	1.12	3.64	1.15	3.14	1.08	4.11	1.07	4.32	.96	4.02	1.11	1-4** 2-3**
To promote PNG's cultural practices.	2.60	.94	2.63	.85	2.58	.97	3.24	1.07	3.29	1.07	3.21	1.23	1-4**
To promote language, maths and library skills of university students.	3.44	.98	3.63	.99	3.42	.96	4.13	1.11	4.18	1.06	4.12	1.14	1-4**

[1] Committee on University Trained Manpower

[2] Commission for Higher Education

Table 6.2

Actual and Preferred Rankings of Local Specific Goals for PNG Universities

	Actual			Preferred		
Local Specific Goals Statements	1 All	2 Admin	3 Acad	4 All	5 Admin	6 Acad
To review university priorities/ programs in cooperation with CUTM guidelines.	5	5	6	9	9	9
To adapt and modify teaching methods to Papua New Guinean learning styles.	8	8	8	6	6	5
To cooperate with CHE in planning higher education in PNG.	2	1	3	2	2	2
To provide in-service education/ training for teachers / instructors.	6.5	6	7	7	8	7
To train national staff for universities in PNG.	1	2	1	1	1	1
To develop joint-university programs with PNGUT or UPNG.	9	9	10	8	6	8
To encourage PNG women to obtain university education.	6.5	7	5	4	6	3
To establish a single salary/ working condition for university staff.	4	3	4	5	3	6
To promote PNG's cultural practices.	10	10	9	10	10	10
To promote language, maths and library skills of university students.	3	4	2	3	4	4

Spearman's rank order test results of the total group rankings are: 1 with 4 =.84 (P=.001); 2 with 3 =.85 (P=.001); 5 with 6 =.67 (P=012); PNGUT with UPNG (IS) =.72 (P=010); PNGUT with UPNG (SB)=.71 (P=.001)

Table 6.3

Top and Bottom Actual and Preferred Local Specific Goals for PNG Universities

	Actual	Preferred
Top	To train national staff for universities in PNG. (3.7)	To train national staff for universities in PNG. (4.3)
	To cooperate with CHE in planning higher education in PNG. (3.5)	To cooperate with CHE in planning higher education in PNG. (4.3)
	To promote language, maths and library skills of university students. (3.4)	To promote language, maths and library skills of university students. (4.1)
	To establish a single salary / woking condition for university staff. (3.3)	To encourage PNG women to obtain university education. (4.1)
	To review university priorities and programs in cooperation with CUTM guidelines. (3.1)	To establish a single salary/working condition for university staff. (4.1)
Bottom	To provide in-service education and training for teachers /instructors. (3.1)	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)
	To encourage PNG women to obtain university education. (3.1)	To provide in-service education and training for teachers / instructors. (3.9)
	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.0)	To develop joint-university programs with PNGUT or UPNG. (3.7)
	To develop joint-university programs with PNGUT or UPNG. (2.6)	To review university priorities and programs in cooperation with CUTM guidelines. (3.5)
	To promote PNG's cultural practices.(2.6)	To promote PNG's cultural practices. (3.2)

These observations are confirmed by statistical tests,viz: (1) there is a high correlation (.84, P=.000) between the actual and preferred goal rankings; (2) all paired comparisons of actual and preferred goal ratings showed statistically significant differences (P ≤ .005), implying that respondents perceive local specific goals to be under-emphasized and prefer that they be given more emphasis in the future.

Administrators and Academics

Tables 6.1 and 6.2 also present the actual and preferred ratings and rankings for administrators and academics. The top and bottom actual goals are presented in table 6.4. One notes the similarity in the groups' rankings. The same five goals appear in the top and bottom sets for each respondent group. Also obvious is the generally higher goal ratings by administrators than by academics. "Promotion of PNG's cultural practices" is rated low by the two groups.

Table 6.4

Top and Bottom Actual Goals of Administrators and Academics in PNG.

	Administrators	Academics
Top	To cooperate with CHE in planning higher education in PNG. (3.9) To train national staff for universities in PNG. (3.8) To establish a single salary /working condition for university staff. (3.6) To promote language, maths and library skills of university students. (3.6) To review university priorities in cooperation with CUTM guidelines. (3.4)	To train national staff for PNG universities. (3.7) To promote language, maths and library skills of university students. (3.4) To cooperate with CHE in planning higher education in PNG. (3.3) To establish a single salary / working condition for university staff. (3.1) To review university priorities / programs in cooperation with CUTM guidelines. (3.0)
Bottom	To provide in-service education and training for teachers/ instructors. (3.4) To encourage PNG women to obtain university education. (3.4)	To provide in-service education and training for teachers / instructors. (3.0) To encourage PNG women to obtain university education. (3.0)
	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.3) To develop joint-university programs with UPNG or PNGUT. (3.1) To promote PNG's cultural practices. (2.6)	To adapt and modify teaching methods to Papua New Guinean learning styles. (2.9) To promote PNG's cultural practices. (2.6) To develop joint-university programs with UPNG or PNGUT. (2.4)

Results of statistical tests confirm these observations, viz: (1) there is a high statistical correlation (.85, P=.000) between the administrators' and academics' rankings; (2) statistically significant differences were evident between the groups ratings of seven out of ten goals.

The top and bottom preferred goals are presented in table 6.5.

Table 6.5

Top and Bottom Preferred Goals of Administrators and Academics in PNG.

	Administrators	Academics
Top	To train national staff for universities in PNG. (4.5)	To train national staff for universities in PNG. (4.3)
	To cooperate with CHE in planning higher education in PNG. (4.5)	To cooperate with CHE in planning higher education in PNG. (4.2)
	To establish a single salary / working condition for university staff. (4.3)	To encourage PNG women to obtain university education. (4.1)
	To promote language, maths and library skills for university students. (4.2)	To promote language, maths and library skills for university students. (4.1)
	To adapt and modify teaching methods to Papua New Guinean learning styles (4.1).	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)
Bottom	To develop joint- university programs with UPNG or PNGUT. (4.1)	To establish a single salary / working condition for university staff.. (4.0)
	To encourage PNG women to obtain university education. (4.1)	To provide in-service education and training for teachers / instructors. (3.8)
	To provide in-service education and training for teachers/ instructors. (4.0)	To develop joint- university programs with UPNG or PNGUT. (3.6)
	To review university priorities / programs in cooperation with CUTM guidelines. (4.0)	To review university priorities / programs in cooperation with CUTM guidelines. (3.3)
	To promote PNG's cultural practices. (3.3)	To promote PNG's cultural practices. (3.2)

There is a high similarity in the groups' ranking. However some differences are evident in the groups' rankings of specific goals. For example, "encouragement of PNG women to obtain university education" is ranked among the top goals for academics but is placed among the bottom goals for administrators albeit with equal ratings. The rankings are reversed in the case of "establishment of a single salary/working condition for university staff," -- this goal relates to concerns about current practice in PNG universities where citizen staff of equal professional status and academic rank receive lower salary and and less employment benefits than their expatriate colleagues.

It must be remembered, however, that in this comparison of top and bottom goals there is no middle ground, therefore the differences between the top and bottom sets may not be educationally significant. One also notes that administrators' ratings are generally higher than the ratings of academics.

Statistical test results indicate that (1) there is a high statistical correlation (.67, P=.012) between the rankings, (2) statistical differences (P ≤ .05) are evident between the groups ratings for four-- "revision of university priorities/programs in cooperation with CUTM guidelines"; "cooperation with CHE in planning higher education in PNG"; "training of national staff for universities in PNG"; and "development of joint-university programs" -- out of ten goals. In each case the administrators' ratings were significantly higher than the ratings of academics.

Local-Specific Goals for UPNG

This section presents responses for UPNG. It begins with the total response then compares responses of administrators with responses of academics. Tables 6.6 and 6.7 present the goal ratings and rankings for UPNG. Further analysis, however is based on the top and bottom rated and ranked goals from each list (See table 6.8).

Table 6.6

Actual and Preferred Ratings of Local Specific Goals for UPNG

	Actual						Preferred						
Local Specific Goal Statements	7 All N=(114) Mean	SD	8 Admin N=(16) Mean	SD	9 Acad N=(88) Mean	SD	10 All N=(114) Mean	SD	11 Admin N=(16) Mean	SD	12 Acad N=(88) Mean	SD	Prob *P≤.05 **P≤.005
To review university priorities / programs in cooperation with CUTM guidelines.	3.04	1.13	3.27	.50	2.97	1.09	3.42	1.30	3.85	1.34	3.31	1.29	7-10**
To adapt and modify teaching methods to Papua New Guinean learning styles.	2.90	1.04	3.19	.95	2.81	1.04	4.05	.99	4.12	.75	4.03	1.03	7-10** 8-9*
To cooperate with CHE in planning higher education in PNG.	3.37	1.01	3.64	.81	3.29	1.02	4.23	.81	4.50	.62	4.15	.82	7-10** 8-9* 11-12*
To provide inservice education/ training for teachers/ instructors.	3.36	[illegible]	3.84	.85	3.22	.97	4.11	.91	4.50	.60	3.99	.93	7-10** 8-9** 11-12**
To train national staff for universities in PNG.	3.77	.97	3.89	.92	3.74	1.02	4.35	.83	4.54	.72	4.30	.86	7-10**
To develop joint university programs with UPNG or PNGUT.	2.50	1.03	2.89	.92	2.38	1.03	3.76	1.16	4.04	.65	3.68	1.21	7-10** 8-9* 11-12**
To encourage PNG women to obtain university education.	3.01	1.00	3.39	1.03	2.90	1.02	4.19	.84	4.20	.77	4.19	.89	7-10**
To establish a single salary/working condition for university staff.	3.28	1.18	3.62	1.10	3.17	1.17	4.27	.92	4.48	.65	4,21	.96	7-10** 8-9* 11-12*
To promote PNG's Cultural practices.	2.26	.96	2.50	.88	2.68	.99	3.40	1.19	3.36	.80	3.40	1.27	7-10**
To promote language, maths and library skills of university students.	3.46	.96	3.62	.91	3.41	.95	4.13	1.15	4.32	1.11	4.08	1.20	8-9**

Table 6.7

Actual and Preferred Rankings of Local Specific Goals for UPNG

Local Specific Goal Statements	Actual 7 All	 8 Admin	 9 Acad	Preferred 10 All	 11 Admin	 12 Acad
To review university priorities/ programs in cooperation with CUTM guidelines.	6	7	6	9	9	10
To adapt and modify teaching methods to Papua New Guinean learning styles.	8	8	8	7	7	6
To cooperate with CHE in planning higher education in PNG.	3	3	3	3	2.5	4
To provide in-service education and training for teachers/instructors.	4	2	4	6	2.5	7
To train national staff for universities in PNG.	1	1	1	1	1	1
To develop joint-university programs with PNGUT or UPNG.	9	9	10	8	8	8
To encourage PNG women to obtain university education.	7	6	7	4	6	3
To establish a single salary and working conditions for university staff.	5	4.5	5	2	4	2
To promote PNG's cultural practices.	10	10	9	10	10	9
To promote language, maths and library skills of university students.	2	4.5	2	5	5	5

Spearman's rank order test conducted on the group's ranking are:
7with 10 = .72 (P=.009); 8 with 9 =.89 (P=.000); 11 with 12 =.69 (P=.012)

Table 6.8

Top and Bottom Actual and Preferred Local Specific Goals for UPNG

	Actual	Preferred
Top	To train national staff for PNG universities. (3.8) To promote language, maths and library skills of university students. (3.5) To cooperate with CHE in planning higher education in PNG. (3.4) To provide in-service education for teachers / instructors. (3.4) To establish a single salary / working condition for university staff. (3.3)	To train national staff for PNG universities. (4.4) To establish a single salary / working condition for university staff. (4.3) To cooperate with CHE in planning higher education in PNG. (4.2) To encourage PNG women to obtain university eduation. (4.2) To promote language, maths and library skills of university students. (4.1)
Bottom	To review university priorities / programs in cooperation with CUTM guidelines. (3.0) To encourage PNG women to obtain university education. (3.0) To adapt and modify teaching methods to Papua New Guinean learning styles. (2.9) To develop joint-university programs with UPNG or PNGUT. (2.5) To promote PNG's cultural practices. (2.3)	To provide in-service education and training for teachers / instructors. (4.1) To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1) To develop joint-university programs with PNGUT or UPNG. (3.8) To review university priorities / programs in cooperation with CUTM guidelines. (3.4) To promote PNG's cultural practices. (3.4)

All Respondents

Table 6.8 presents the top and bottom actual and preferred goals for respondents at UPNG. There is evidence of similarity in the goal rankings, however, some differences are noted between the actual and preferred ratings. The ratings for "preferred are generally higher than for "actual." Also of interest is the preferred emphasis on "encouragement of PNG women to obtain university education." This suggests that a review in UPNG's admission and academic program policies for female clients would likely be welcomed at this time. As noted in chapter two, the current ratio of female to male enrollment in PNG universities is low.

Result of statistical tests indicate that (1) there is a high correlation (.72, P=.009) between the rankings, (2) statistically significant differences are evident between actual and preferred ratings. This result suggests that respondents perceive the goals to be under-emphasized and prefer that they be given more emphasis in the future.

Administrators and Academics

Tables 6.7 and 6.8 also present the actual ratings and rankings for administrators and academics at UPNG. Table 6.9 presents the top and bottom actual goals for administrators and academics.

Table 6.9

Top and Bottom Actual Local Specific Goals for Administrators and Academics at UPNG

	Administrators	Academics
Top	To train national staff for universities in PNG. (3.9)	To train national staff for PNG universities. (3.7)
	To provide in-service education and training for teachers / instructors. (3.8)	To promote language, maths and library skills of university students. (3.4).
	To cooperate with CHE in planning higher education for PNG. (3.6)	To cooperate with CHE in planning higher education in PNG. (3.3)
	To establish a single salary / working conditions for university staff. (3.6)	To provide in-service education and training for teachers/ instructors. (3.2)
	To promote language maths and library skills of university students. (3.6)	To establish a single salary / working condition for university staff. (3.2)
Bottom	To encourage PNG women to obtain univesity education. (3.4)	To review universtiy priorities / programs in cooperation with CUTM guidelines. (3.0)
	To review university priorities / programs in cooperation with CUTM guidelines. (3.3)	To encourage PNG women to obtain university education. (2.9)
	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.2)	To adapt and modify teaching methods to Papua New Guinean learning styles. (2.8)
	To develop joint-university programs with UPNG or PNGUT. (2.9)	To promote PNG's cultural practices. (2.7)
	To promote PNG's cultural practices. (2.5)	To develop joint-university programs with UPNG or PNGUT. (2.4)

A study of table 6.9 shows a similarity in the actual rankings for both groups. The data further reveals that administrators' goal ratings are generally higher than the ratings of academics. These observations are confirmed by statistical test results. They indicate that (1) there is a high correlation between the rankings, (2) administrator's ratings for six of the ten goals were statistically higher.

The top and bottom preferred goals for administrators and academics are presented in table 6.10.

Table 6.10

Top and Bottom Preferred Local Specific Goals for Administrators and Academics at UPNG

	Administrators	Academics
Top	To train national staff for universities in PNG. (4.5)	To train national staff for univesities in PNG . (4.3)
	To cooperate with CHE in planning higher education in PNG. (4.5)	To establish a single salary / working condition for university staff. (4.2)
	To provide in-service education and training for teachers / instructors. (4.5)	To encourage PNG women to obtain university education. (4.2)
	To establish a single salary / working condition for university staff. (4.5)	To cooperate with CHE in planning higher education in PNG. (4.2)
	To promote language, maths and library skills of university students. (4.3)	To promote language, maths and library skills of university students. (4.1)
Bottom	To encourage PNG women to obtain university education. (4.2)	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.0)
	To adapt and modify teaching methods to Papua New Guineans' learning styles. (4.1)	To provide in-service education and training for teachers / instructors. (4.0)
	To develop joint-university programs with UPNG or PNGUT. (4.0)	To develop joint-university programs with UPNG or PNGUT. (3.7)
	To review university priorities / programs in cooperation with CUTM guidelines. (3.9)	To promote PNG's cultural practices. (3.4)
	To promote PNG's cultural practices. (3.4)	To review university priorities / programs in cooperation with CUTM guidelines. (3.3)

Data in table 6.10 show a similarity in the goal rankings. Of particular note is " training of national staff for PNG universities," which again heads each list.

Statistical comparison of preferred goal rankings (See table 6.4) confirms similarities (.69, P=.012) between the groups. Statistical results of goal ratings revealed that significant differences (P≤.05) were evident between the groups for four local specific goals: cooperation with CHE in planning higher education in PNG; provision of in-service education for teachers/instructors; development of joint-university programs with PNGUT; and establishment of a single salary/working condition for university staff. Administrators' ratings were higher for each goal.

Specific Goals for PNGUT

This section presents responses for PNGUT. Tables 6.11 and 6.12 show the actual and preferred goal ratings and rankings of respondents. For purpose of further analysis the five top and bottom goals from each list are highlighted in subsequent tables (See Table 6.13).

Table 6.11

Actual and Preferred Ratings of Local Specific Goals for PNGUT

Local Specific Goal Statements	Actual						Preferred						Prob
	13 All N=(70)		14 Admin N=(16)		15 Acad N=(43)		16 All N=(70)		17 Admin N=(16)		18 Acad N=(43)		*P≤.05 **P≤.005
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
To review university priorities / programs in cooperation with CUTM guidelines.	3.26	.96	3.60	.87	3.07	1.02	3.61	1.18	4.06	.77	3.30	1.22	13-16** 14-15* 17-18**
To adapt and modify teaching methods to Papua New Guinean learning styles.	3.24	1.02	3.40	.94	3.14	1.03	4.11	.80	4.08	.61	4.12	.86	13-16**
To cooperate with CHE in planning higher education in PNG.	3.63	.83	4.08	.74	3.41	.82	4.30	.60	4.52	.50	4.18	.66	3-16** 14-15** 17-18*
To provide in-service education and training for teachers/ instructors.	2.70	1.09	2.96	1.21	2.51	1.07	3.49	1.04	3.56	1.03	3.42	1.11	13-16**
To train national staff for universities in PNG.	3.70	.84	4.80	.81	3.65	.87	4.33	.76	4.38	.45	4.30	.67	13-16** 17-18*
To develop joint- university programs with UPNG or PNGUT.	2.83	1.14	3.44	1.31	2.54	1.03	3.60	1.14	4.12	.72	3.30	1.16	13-16** 14-15** 17-18**
To encourage PNG women to obtain university education.	3.30	.87	3.44	1.15	3.23	.78	4.00	.95	3.96	.99	4.02	.93	13-16**
To establish a single salary/working condition for university staff.	3.24	.99	3.75	1.23	3.02	.85	3.81	1.25	4.24	1.22	3.60	1.31	13-16** 14-15*
To promote PNG's cultural practices.	2.49	.86	2.84	.85	2.33	.83	2.94	1.08	3.28	1.25	2.79	1.03	13-16**
To promote language, maths and library skills of university students.	3.47	1.00	3.72	1.09	3.47	.98	4.10	1.07	4.12	1.03	4.23	1.02	13-16**

Table 6.12

Actual and Preferred Rankings of Local Specific Goals for PNGUT

Local Specific Goal Statements	Actual 13 All	14 Admin	15 Acad	Preferred 16 All	17 Admin	18 Acad
To review university priorities/ programs in cooperation with CUTM guidelines.	5	5	6	7	4	8.5
To adapt and modify teaching methods to Papua New Guinean learning styles.	6.5	8	5	3	7	4
To cooperate with CHE in planning higher education in PNG.	2	2	3	2	1	3
To provide in-service education/ training for teachers / instructors.	9	9	9	9	9	7
To train national staff for universities in PNG.	1	1	1	1	2	1
To develop joint-university programs with PNGUT or UPNG.	8	6.5	8	8	5.5	8.5
To encourage PNG women to obtain university education.	4	6.5	4	5	8	5
To establish a single salary/ working condition for university staff.	6.5	3	7	6	3	6
To promote PNG's cultural practices.	10	10	10	10	10	10
To promote language, maths and library skills of university students.	3	4	2	4	5.5	2

Spearman's rank order tests results conducted on the above group rankings are: 13 with 16 =.88 (P =.000); 14 with 15 =.69 (P=.021); 17 with 18=.53 (P=.051)

Table 6.13

Top and Bottom Actual and Preferred Local Specific Goals for PNGUT

	Actual	Preferred
Top	To train national staff for universities in PNG. (3.7)	To train national staff for universities in PNG. (4.3)
	To cooperate with CHE in planning higher education in PNG. (3.6)	To cooperate with CHE in planning higher education in PNG. (4.3)
	To promote language, maths and library skills of university students. (3.5)	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)
	To encourage PNG women to obtain university education. (3.3)	To promote language, maths and library skills of university students. (4.1)
	To review university priorities / programs in cooperation with CUTM guidelines. (3.3)	To encourage PNG women to obtain university education. (4.0)
Bottom	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.2)	To establish a single salary / working condition for university staff. (3.8)
	To establish a single salary / working condition for university staff. (3.2)	To review university priorities / programs in cooperation with CUTM guidelines. (3.6)
	To develop joint-university programs with UPNG or PNGUT. (2.8)	To develop joint-university programs with UPNG or PNGUT. (3.6)
	To provide in-service education and training for teachers / instructors. (2.7)	To provide in-service education and training for teachers / instructors. (3.5)
	To promote PNG's cultural practices. (2.5)	To promote PNG's cultural practices. (2.9)

All Respondents

There is a high similarity in the actual and preferred rankings. "Adaptation and modification of teaching methods to Papua New Guinean learning styles," is an exception. This goal is ranked among the bottom goals for "actual" but among the top for "preferred". It was also mentioned in the interviews (See Tables 8.2, 8.3 and 8.4). Respondents at PNGUT are aware of the problem and recommend that appropriate actions be taken to address it in the future.

Also obvious is the difference in the ratings--the "preferred" generally higher than those for "actual"-- implying that respondents at PNGUT perceive the goals to be under-emphasized and prefer that more emphasis be given.

These observations are confirmed by statistical test results which indicate that, (1) there is a high correlation (.88, P=.000) between the actual and preferred rankings, (2) statistically significant differences (P≤ .005) exist in the actual and preferred ratings for all goal comparisons.

Another interesting observation is the presence of "establishmeht of a single salary/working condition for university staff," among the bottom ranked goals for "actual" and "preferred." A study of previous tables (6.3 and 6.8) showed that this goal was ranked among the top goals for PNG and UPNG, yet it appears in the bottom ranking for PNGUT. The data suggest that this may not be a concern for respondents at PNGUT and, any attempt to revise salaries and working conditions for university staff may have less support at PNGUT.

A final comment on data table 6.13 relates to the low ranking of "provision of in-service education and training for teachers/instructors" at PNGUT. This reflects the fact that PNGUT does not offer teacher education programs.

Administrators and Academics

Table 6.14 displays the top and bottom actual goals for administrators and academics.

There is a similarity in the goal rankings of administrators and academics, but the goal ratings for administrators are generally higher than the ratings of academics. These two observations are confirmed by statistical test results which show that (1) there is a high correlation (.69, P=.021) between the groups' rankings, (2) statistically significant differences (P≤.005) exist between administrators and academics ratings of four out of ten goals, in each case administrators' ratings being higher.

A third observation follows from previous discussion of "establishment of a single salary/ working condition for university staff." Administrators ranked this goal among the top goals whereas academics ranked it among the bottom goals. It appears that academics at PNGUT have less concerns about this goal.

Table 6.14

Top and Bottom Actual Local Specific Goals of Administrators and Academics at PNGUT

	Administrators	Academics
Top	To train national staff for universities in PNG. (4.8)	To train national staff for universities in PNG. (3.7)
	To cooperate with CHE in planning higher education in PNG. (4.1)	To promote language, maths and library skills of university students. (3.5)
	To establish a single salary / working condition for university staff. (3.8)	To cooperate with CHE in planning higher education in PNG. (3.4)
	To promote language, maths and library skills for university students. (3.7)	To encourage PNG women to obtain university education. (3.2)
	To review university priorities / programs in cooperation with CUTM guidelines. (3.6)	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.1)
Bottom	To develop joint-university programs with UPNG or PNGUT. (3.4)	To review university priorities / programs in cooperation with CUTM guidelines. (3.1)
	To encourage PNG women to obtain university education. (3.4)	To establish a single salary / working condition for university staff. (3.0)
	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.4)	To develop joint-university programs with UPNG or PNGUT. (2.5)
	To provide in-service education and training for teachers / instructors. (3.0)	To provide in-service education and training for teachers / instructors. (2.5)
	To promote PNG's cultural practices. (2.8)	To promote PNG's cultural practices. (2.3)

Concerning "encouragement of women to obtain university education," academics ranked this goal higher than did administrators. Similarly academics ranked 'to adapt and modify teaching methods to Papua New Guinean learning styles" higher than did administrators.

Table 6.15 reveals the top and bottom preferred goals for administrators and academics. There is less observable similarity in the rankings and some obvious differences. "Development of joint-university programs" is a case in point. Administrators rate this goal higher than do academics and it is ranked in the top set for administrators and the bottom set for academics.

Table 6.15

Top and Bottom Preferred Local Specific Goals of Administrators and Academics at PNGUT

	Administrators	Academics
Top	To cooperate with CHE in planning higher education in PNG. (4.5)	To train national staff for universities in PNG. (4.3)
	To train national staff for universties in PNG. (4.4)	To promote language, maths and library skills of university students. (4.2)
	To establish a single salary / working condition for staff. (4.2)	To cooperate with CHE in planning higher education in PNG. (4.2)
	To review university priorities / programs in cooperation with CUTM guidelines. (4.2)	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)
	To develop joint-university programs with UPNG or PNGUT. (4.1)	To encourage PNG Women to obtain university education. (4.0)
	To promote language, maths and library skills of university students. (4.1)	To establish a single salary / working condition for university staff. (3.6)
	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)	To provide in-service education and training for teachers / instructors. (3.4)
Bottom	To encourage PNG women to obtain university education. (4.0)	To review university priorities / programs in cooperation with CUTM guidelines. (3.3)
	To provide in-service education and training for teachers / instructors. (3.6)	To develop joint-university programs with UPNG or PNGUT. (3.3)
	To promote PNG's cultural practices. (3.3)	To promote PNG's cultural practices. (2.8)

Statistical test results indicate that (1) there is a high correlation (.53, P=.051) between the rankings, (2) statistically significant (P≤ .05) differences exist between the groups' ratings for " revision of university priorities/ programs in cooperation with CUTM guidelines," "cooperation with CHE in planning higher education in PNG," "training of national staff for universities in PNG" and development of joint-university programs with UPNG." Administrators' ratings for each goal was higher than those of academics.

Comparison of UPNG with PNGUT

This section presents comparisons of UPNG and PNGUT respondents' actual and preferred ratings and rankings. Full data for this section are presented in Tables 6.6 and table 6.7 (columns 7 and 10) and Tables 6.11 and 6.12 (columns. 13 and 16). For purposes of further discussion, the top and bottom actual and preferred goals are shown in tables 6.16 and 6.17.

Actual Goals. There are some differences between the actual rankings of UPNG and PNGUT goals. For example "to provide in-service education and training for teachers/ instructors," and " to encourage PNG women to obtain university education"--the former is ranked among the bottom goals by PNGUT whereas UPNG places it among the top goals. This difference is expected because PNGUT does not offer teacher education programs.

The second difference, "encouragement of PNG women to obtain university education" is ranked among PNGUT's top goals but appears among the bottom goals for UPNG, suggesting that PNGUT respondents think its of a high importance.

Spearman's rank order correlation coefficient test result indicated high correlation (.72, P=.010) in actual goal rankings of the two universities. Statistically significant differences (P≤ .05) exist in the actual ratings of the two universities for "provision of in-service education for teachers/instructors," "adaptation of teaching methods to Papua New

Guinean learning styles," "development joint-university programs," and "encouragement of PNG women to obtain university education". UPNG respondents' actual rating of "provision of in-service education for teachers/instructors," is higher than PNGUT respondents' rating. Meanwhile, PNGUT respondents' actual ratings for "adaptation of teaching methods to the learning styles of Papua New Guinean," "development of joint-university programs" and "encouragement of PNG women to obtain university education," were higher than UPNG respondents' ratings..

Table 6.16

Top and Bottom Actual Goals for UPNG and PNGUT

	UPNG	PNGUT
Top	To train national staff for universities in PNG. (3.8) To promote language, maths and library skills of university students. (3.5) To cooperate with CHE in planning higher education in PNG. (3.4) To provide in-service education and training for teachers/ instructors. (3.4) To establish a single salary/ working condition for university staff. (3.3)	To train national staff for universities in PNG. (3.7) To cooperate with CHE in planning higher education in PNG. (3.6) To promote language, maths and library skills of university students. (3.5) To encourage PNG women to obtain university education. (3.3) To review university priorities/ programs in cooperation with CUTM guidelines. (3.3)
Bottom	To review university priorities/ programs in cooperation with CUTM guidelines. (3.1) To encourage PNG women to obtain university education. (3.0) To adapt and modify teaching methods to Papua New Guinean learning styles. (2.9) To develop joint-university programs with PNGUT. (2.5) To promote PNG's cultural practices. (2.3)	To adapt and modify teaching methods to Papua New Guinean learning styles. (3.2) To establish a single salary/working condition for university staff. (3.2) To develop joint-university programs with UPNG. (2.8) To provide in-service education and training for teachers/ instructors. (2.7) To promote PNG's cultural practices. (2.4)

Table 6.17

Top and Bottom Preferred Goals of UPNG and PNGUT

	UPNG	PNGUT
Top	To train national staff for universities in PNG. (4.4)	To train national staff for universities in PNG. (4.3)
	To establish a single salary / working condition for university staff. (4.3)	To cooperate with CHE in planning higher education in PNG. (4.3)
	To cooperate with CHE in planning higher education in PNG. (4.2)	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)
	To encourage PNG women to obtain university education. (4.2)	To promote language, maths and library skills of university students. (4.1)
	To promote language, maths and library skills of university students. (4.1)	To encourage PNG women to obtain university education. (4.0)
	To provide in-service education and training for teachers/instructors. (4.1)	To establish a single salary/working condition for university staff. (3.8)
	To adapt and modify teaching methods to Papua New Guinean learning styles. (4.1)	To review university priorities/ programs in cooperation with CUTM guidelines. (3.6)
Bottom	To develop joint-university programs with PNGUT. (3.8)	To develop joint-university programs with UPNG. (3.6)
	To review university priorities/ programs in cooperation with CUTM guidelines. (3.4)	To provide in-service education and training for teachers/ instructors. (3.5)
	To promote PNG's cultural practices. (3.4)	To promote PNG's cultural practices. (2.9)

Preferred Goals. Data in table 6.17, reveal the following trends. The preferred goal rankings in the two universities are similar. However, there are some notable differences: "Establishment of a single salary/working condition for university staff" is a case in point. It appears among the top goals for UPNG but is among the bottom goals for PNGUT.

Another interesting observation is the relatively low ranking of "provision of in-service education for teachers/instructors by the two universities. This observation suggests some reservations about the future of this program in the universities, particularly during a time of financial shortage.

Results of statistical tests for the rankings and ratings indicate a high correlation 71, (P=001) between the two institutions' rankings . Statistically significant differences were evident for "provision of in-service education for teachers and instructors," "establishment of single salary and working condition for university staff" and "promotion of PNG's cultural practices." Respondents at UPNG rated these of higher preferred importance at their university than did PNGUT respondents.

Summary

Data on respondents' perceptions of 10 local-specific goals for PNG universities were presented in this chapter. In particular, the total respondent goal perceptions for PNG as a whole, and for each institution were identified. The chapter also contains the actual and preferred goal perceptions of administrators and academics as a combined group, and as subgroups in their particular university. While an attempt was made to explain some of the differences in goal perceptions of various groups, it was mostly speculation. Future research might explore possible rationales for the differences found. A summary of the main findings follows.

Goals for PNG

PNG respondents' goal rankings are similar but their ratings vary significantly for actual and preferred goals. They perceive the ten local specific goals to be under-emphasized and prefer that they be given more emphasis.

The top five actual goals for PNG are: training of national staff for PNG universities; cooperation with CHE in planning higher education in PNG; promotion of language, mathematics and library skills of university students; establishment of a single salary and working condition for university staff and revision of university priorities/programs in cooperation with CUTM guidelines.

The top five preferred goals are: training of national staff for PNG universities; cooperation with CHE in planning higher education in PNG; promotion of language, mathematics and library skills of university students; encouragement of PNG women to obtain university education; and establishment of a single salary and working condition for university staff.

Promotion of PNG's cultural practices; revision of university priorities/programs in cooperation with CUTM guidelines; development of joint-universities programs; and provision of in-service education and training for teachers/instructors, were among the bottom rated preferred goals.

Administrators perceived seven out ten goals to be of higher importance than did academics.

Goals for UPNG

Respondents at UPNG have similar goal ranking but vary in their actual and preferred ratings. They perceive the 10 goals to be under-emphasized and prefer that they be further emphasized in the future.

Training of national staff at UPNG; cooperation with CHE in planning higher education; promotion of language, mathematics and library skills of university students;

and establishment of a single salary and working conditions for university staff; and provision of in-service education for teachers/instructors, are among the top goals at UPNG.

Promotion of PNG's cultural practices; development of joint-university programs; revision of university priorities/programs in cooperation with CUTM guidelines; adaptation and modification of teaching methods to Papua New Guinean learning styles, are among the bottom rated goals.

Rankings for administrators' and academics' actual goal are similar but their goal ratings vary significantly for the following: adaptation and modification of teaching methods to Papua New Guinean learning styles; cooperation with CHE in planning higher education; provision of in-service education for teachers/instructors; development of joint-university programs; establishment of a single salary/working condition for university staff; and promotion of language, mathematics and library skills of university students. Administrators perceived these goals to be of higher importance than did academics.

Rankings for administrators' and academics' preferred goals are similar but their ratings varied for the following: cooperation with CHE in planning higher education in PNG; provision of in-service education for teachers/instructors; development of joint-university programs with PNGUT; and establishment of a single salary/working condition for university staff. Administrators perceived each goal to be more important than did academics.

Goals for PNGUT

Rankings for PNGUT respondents' actual and preferred goals are similar but their ratings vary. Respondents perceive the 10 goals to be under-emphasized in their university and prefer that they be given further emphasis.

Rankings for administrators' and academics' actual goals are relatively similar, however the groups differed in their goal ratings for the following: revision of university priorities/programs in cooperation with CUTM guidelines; cooperation with CHE in planning higher education in PNG; development of joint-university programs; and establishment of a single salary/working condition for university staff. Administrators' ratings for these goals are higher than academics'.

Administrators' and academics' preferred rankings are similar but their goal ratings varied for the following: revision of university priorities and programs in cooperation with CUTM guidelines; cooperation with CHE in planning higher education in PNG; training of national staff for PNG universities; and development of joint-university programs with UPNG. Administrators' ratings are higher than academics'.

UPNG and PNGUT

Respondents in both universities ranked training of national staff for universities, cooperation with CHE in planning higher education in PNG and promotion of language, mathematics and library skills for students were among the top goals for both universities in PNG. Promotion of PNG's cultural practices and development of joint-universities programs were among the bottom goals for universities in the country.

Differences were evident in the actual ratings of the two universities for "provision of in-service education for teachers/instructors," "adaptation of teaching methods to Papua New Guinean learning styles," "development joint-university programs," "establishment of single salary and working condition for university staff," "promotion of PNG's cultural practices ," "and encouragement of PNG women to obtain university education." UPNG respondents' rating of "provision of in-service education for teachers/instructors," "establishment of single salary and working condition for university staff," and "promotion of PNG's cultural practices" were higher than PNGUT respondents' while PNGUT respondents' ratings for "adaptation of teaching methods to the learning styles of Papua New Guinean," "development of joint-university programs" and "encouragement of PNG women to obtain university education," were higher than UPNG respondents'.

UPNG respondents' rated the following preferred goals of higher importance than did PNGUT respondents: provision of in-service education and training for teachers/instructors; establishment of single salary and working conditions for university staff and promotion of PNG's cultural practices.

Discussion

Three common trends are evident from the discussion: (1) respondents are in agreement that the goals are under-emphasized; (2) administrators generally rated both actual and preferred goals higher than did academics'; and (3) training of national staff for universities in PNG is an important actual and preferred goal in both universities.

Some explanations for these observations are offered. The common view that the ten local goals are under-emphasized may represent a desire to improve institutional performance. It would therefore be in the universities' and national interest to implement some of the recommendations suggested by respondents in this study.

The difference between administrators' and academics' goal perceptions may be due to the nature of the groups' tasks. For example academics may be too preoccupied with teaching and other immediate tasks to be concerned about broad institutional goals.

The emphasis on training of national staff for universities in PNG is not surprising as this complies with one of the foundation goals for universities in PNG.

Another difference observed between UPNG and PNGUT is that respondents in the latter rated in-service education of instructors as least important whereas UPNG respondents rated it of high importance. This evidence confirms planned differences between the two institutions: PNGUT has primarily been a technically oriented institution and does not have a faculty of education nor does it conduct teacher education programs for technical instructors in technical colleges. This function is performed by UPNG's Faculty of Education and Goroka University College. It therefore follows that respondents at

UPNG would be more inclined to provide a higher rating for in-service education of teachers and instructors. These explanations, however, are more speculative than factual.

CHAPTER 7

DOCUMENTED GOALS OF UNIVERSITIES IN PNG

This chapter presents excerpts of documented goals extracted from 18 articles related to university education in PNG. The articles represent various views of authors about university goals.

It cannot be claimed that the chosen list of items is complete, however measures were taken to ensure the 18 articles (1) cover the 25-year period (1964-89) of university development in the country, (2) contain references to goals, missions, priorities, or objectives of universities, (3) include relevant legal documents such as the national constitution and university acts and statutes, (4) include significant government commissions, committees and institutional reports, and (5) represent some government, institution and private citizens' views about university goals. On the same note, no claim is made that all explicit or implicit goals have been extracted from the articles; rather an attempt was made to select the goals most central to the rationale put forward by the authors.

Goal-related data from the documents are presented in chronological order in Tables 7.1 to 7.14 beginning with documents published in the 1960s and ending with documents published in the 1980s.

The tables display (a) sources and dates of each document or article, (b) quotations and page numbers highlighting relevant goals , (c) comments deemed necessary to explain the data and (d) relevant goals, functions, aims or objectives mentioned or implied in the text. Where appropriate, the related IGI goals are noted in brackets.

Documents Published in the 1960s

The following presentations begin with the title of each article and a brief description of its context, followed by the related table with appropriate quotations, and concludes with a summary of the author's main views of university goals and possible impact of such views on university developments.

Currie, G., Gunther, J. T., Spate, O. H. K. (1964). The Commission on Higher Education in Papua New Guinea (The Currie Report). Canberra: Australian Government.

As discussed in chapter 2, political changes towards self-determination and independence throughout the third world influenced PNG's political processes. Self-determination for PNG was imminent when the first House of Assembly was established in 1964 and the 1970s was set as a possible date for independence. Consequently, higher education was an imperative.

The Commission on Higher Education in PNG was established to examine the country's higher education needs and make recommendations to the colonial government on future developments. University-related goals mentioned by the Commission are shown in Table 7.1.

The Commission on Higher Education recommended immediate provision of higher-than-secondary education. Academic freedom, intellectual orientation, academic development, professional manpower training or vocational preparation, and social and cultural developments were among the reasons given by the commissioners for the establishment of universities in PNG. To realize these goals, a detailed report was submitted to the government to establish an autonomous university and an institute of higher technical education in PNG. Consequently, the University of Papua New Guinea and Papua New Guinea Institute of Higher Technical Education (now the Papua New Guinea University of Technology) were established in 1965 and 1969 respectively.

TABLE 7.1

Goal Excerpts-- Commission on Higher Education in Papua New Guinea 1964

Goal Excerpts	Related Goals
"The Commission was impressed by the imperative need to train large numbers of indigenous people for the wide range of technical jobs in industry and the administration itself..." (p.iv).	Professional Manpower Training (Vocational Preparation)
"A much smaller number of people must be trained to the highest level for professional and administrative requirements of the country..." (p. iv).	(Advanced Training)
"It is of vital importance that the youth of Papua and New Guinea are not only instructed in practical knowledge and skills but are guided to use their minds as well as the tools of trades" (p. 24).	(Academic Development) and (Intellectual Orientation)
"There are aspects of cultural and artistic achievement which should not be allowed to go into the discard. The astonishing architecture of the 'Sepik Haus Tambaran', the polychrome wooden structure from the same area, Tami and Trobriand carvings, the basketry of Buin, the feeling for kin and community -- in all these, all Papua New Guineans should take legitimate pride" (p. 9).	(Cultural Aesthetic Awareness)

Documents Published in the 1970s

The mode of presentation of the following articles follows the same outline suggested for articles published during the 1960s.

Brown, A., Cohen, S. W., Eri, V. S. (1971). The Committee of Inquiry into Higher Education Report. (The Brown Report). Canberra: Australian Government.

Rapid growth of post secondary institutions in the 1960s and the prospect of independence during the 1970s inspired the colonial administration to establish the Committee of Inquiry into Higher Education (Brown et al.) in 1971. The Committee's terms of reference were

> to inquire into and make recommendations in respect of institutions that conduct post secondary and tertiary courses on -
> (a) The immediate changes considered desirable to rationalise and co-ordinate developments of the institutions to achieve-
> (i) balanced growth of enrolments in keeping with the availability of school leavers and the projected demands within Papua New Guinea for trained manpower;
> (ii) maximum economies of scarce staff and physical resources;
> (b) The longer term changes considered desirable for these purposes, and the nature, composition and powers of a permanent machinery required to achieve them and advise the Government on these matters;
> (c) What it considers to be the most suitable arrangements for the management of institutions, other than the University and the Institute of Technology, including any variations desirable in the conditions of service of their staff,
> (d) The arrangements considered desirable to determine the status of various awards including the criteria that should be used to assess courses and ensure consistency of nomenclature. (p. vii)

University-related goals expressed by this Committee are presented in Table 7.2. The Committee emphasized co-ordinated planning and development of post -secondary and tertiary institutions for Papua New Guineans to enhance their access to productive employment in the full range of the country's economic enterprises. In other words, the committee emphasized promotion of students' academic, intellectual, personal and vocational skills to prepare them to meet future challenges posed by developments in the country. In sum the Committee re-iterated goals articulated by the Commission on Higher Education in 1964. Apart from its support of the above goals the commission, as stated in its terms of reference, had minimal say on university developments in the country.

Table 7.2

Goal Excerpts-- Committee of Inquiry into Higher Education in Papua New Guinea 1971

Goal Excerpts	Related Goals
" Because of the uncertainty of manpower predictions .. . we have worked on the principle that it is preferable to aim at producing people with a broadly based preparation who are likely to encourage the production of highly specialized people" (p. 2).	(Academic Development) (Intellectual Orientation) (Individual Personal Development)
". . . that the Institute of Technology conduct a range of semi-professional technician courses" (p. 5).	(Vocational Preparation)

Gris, G. B., Moi, A., Crocombe, R. G., Harvey, V., Kilage, I., Low, D. A., Rooney, N., Kisokau, P., Sarei, A., Waiko, J. (1974). The Committee of Enquiry Into University Development. (The Gris Report) Port Moresby: Papua New Guinea Government

By 1974, PNG had assumed self-government, and was planning for independence in 1975. Most political decisions about the country's future were determined by the House of Assembly, under the leadership of Chief Minister Mr. Somare and his PANGU Party. It was important that the indigenous government firmly establish its identity by instituting changes based on the proposed Constitution and its Principles (See Table 7.10). As known instruments of change, PNG universities were expected to take leading roles in bringing about changes to realize national aspirations. The government believed that a primary step toward this end was to align university objectives with the national constitution and its related principles. Consequently the Committee of Enquiry into University Development 1974, (subsequently known as the Gris Committee) was commissioned to set guidelines for future developments in universities

The timing of the committee and the constitution of its members (members were predominantly Papua New Guineans and Dr Gabriel Gris, who later became the first national Vice Chancellor, was appointed Chairman of the Committee), were indicative of the Somare government's attempts to adapt institutions to reflect and promote the nation's political, cultural and social values.

The Committee articulated many objectives for PNG universities. Some relevant excerpts are presented in Table 7.3.

Table 7.3
Goal Excerpts-- The Committee of Enquiry into University Development (The Gris Report) 1974.

Goal Excerpts	Related Goals
The Committee strongly emphasized the need for the universities to formulate their objectives to reflect the national goals and directive principles. "The university system is vitally important to our development as a nation. . ." (p.3). "It is . . . obvious that the Papua New Guinea leaders want a university system that promote the ideals embodied in the Eight Point Plan and the proposed constitution " (p. 6). It is implied in the above citation that the National Goals and Directive Principles in the preamble of the country's Constitution are important goals for universities in PNG.	National Goals and Directive Principles: Decentralization; Rural Improvement; Equitable distribution of income and opportunities (Social Egalitarianism); Self Reliance (Individual Personal Development); and Papua New Guinean Ways.
"As official policy aims for a more egalitarian society, both staff and students within the university system must do everything in their power to minimize stratification and preveliges" (p.3).	(Social Egalitarianism)
" University study opportunities are to date available only to a privilege few. We believe that such opportunities could be made more available then now, and towards this end, we have recommended that major effort be directed towards other Papua New Guineans working throughout the country" (p.4).	(Social Egalitarianism) and (Off-Campus Learning)
" The government aims to promote self-reliance as a way of life for Papua New Guineans . The hope is that individuals, groups of individuals, and the nation as a whole will rely much more upon their potential resources and less on others.... For self- reliance to become a reality there is a need for a level of consciousness and confidence that much can be done within Papua New Guinea without necessarily depending on grants and loans of funds and personnel from without. The university institutions apart from producing trained manpower can assist in promoting consciousness and confidence which are needed" (p.4).	Self- Reliance (Individual Personal Development) Manpower Training or (Vocational Preparation) and (Individual Personal Development)

Continued

Table 7.3 (cont.'d)

Goal Excerpts-- The Committee of Enquiry into University Development 1974 (The Gris Report)

Goals Excerpts	Related Goals
" The university is an ideal place where diverse cultures of the land can be studied and compared with each other as well as with imported ways and values. . . . Culture is a living thing which adapts itself to new forces. The rich diversity of Papua New Guinea's cultures opens the way for further integration and diffussion which are necessary in any plural society. In the world of art and entertainment, work at the universities has had a significant and good effect: We commend all efforts made in this direction, and the formation of cultural groups which could study and demonstrate various cultural forms in conjunction with the new Institute of Cultural Studies and the Centre for Creative Arts " (p.6).	(Cultural Aesthetic Awareness) Papua New Guinean Ways
"The university should serve as the conscience of the nation. University staff and students have an obligation to provide careful analysis and constructive comments but criticism for its own sake is of little use. . . " (p.7).	(Social Criticism / Activism)
"We would like to see the university system encourage individuality within diversity and dissent within a climate of tolerance and understanding especially when more Papua New Guineans staff the institutions " (p.7).	(Individual Personal Development) (Social Egalitarianism)
" A university contains scarce resources and this is particularly true of third world universities. But at the same time most university students and staff do not have the same degree of experience in grappling with challenges as they occur in life of persons in employment. It is therefore necessary that there be an exchange of staff between university system and government to enable maximum use of knowledge and experience available. . . . Universities in many third world countries have brought benefits but they have also brought problems such as graduate unemployment and very high training costs and demands by graduates for higher incomes despite the poverty of most people surrounding them. These problems are worsened by a sense of irrelevance felt about many things which universities teach and with the conditioning processes to which university students are exposed " (p.8).	(Accountability / Efficiency)

Continued

Table 7.3 (cont.'d)

The Committee of Enquiry into University Development 1974
(The Gris Report)

Goal Excerpts	Related Goals
"University Programs must reflect the needs of the nation The University of Papua New Guinea and the Papua New Guinea University of Technology were established to provide Papua New Guinea with local people educated and trained to serve its interest. The depth and length of courses offered within the university system should therefore be geared to the university trained manpower needs of the country " (p.10).	(Accountability / Efficiency) (Vocational Preparation) National Needs and Well-being
"It is necessary to orientate existing institutions and courses so that the projected manpower needs of the sector can also be deployed in the rural sector. . . . It will probably be necessary to develop a new category of manpower classification and to develop new courses for some specialists rural workers " (p. 10).	Manpower Needs (Vocational Preparation) (Accountability / Efficiency)

The Committee recommended that universities in PNG set their goals to reflect the nation's eight point plan, the national goals and directive principles. A study of the national goals and directive principles suggests that they generally reflect goals common to universities worldwide. Social egalitarianism, individual personal development, cultural /aesthetic awareness, public service, vocational preparation, off-campus learning, intellectual orientation, academic development and accountability/efficiency were among the goals implied in the nation's constitutional goals and directive principles. Similarities are also evident between the descriptions of national goals articulated by the Committee and the definitions of goals described in the IGI instrument.

In essence, the Committee repeated goals articulated by the Commission on Higher Education (1964) and the IGI instrument but provided further details of their relationships with the aspirations of the new state.

The goal of Papua New Guinean Ways articulated by the Committee is, however, unique to PNG universities. This goal, rooted in the national constitution, challenges the universities to adapt and establish programs to accommodate Papua New Guinean modes of learning, thinking and organizational structures and if such modes were found to be ambiguous and undefined, the Committee encouraged universities to research into the social and cultural knowledge and practices of the people and to assist the nation in defining related concepts. In discussing the roles of universities Prime Minister, Mr. Somare, (1976) reiterated this view:

> Papua New Guinea has been a paradise for the research worker. Anthropologists, sociologists and environmentalists, have examined our people, our land, our history, our culture, our wildlife under the microscope. . .drawn their conclusions. . .and gone away leaving us with feelings of inferiority or superiority. It would be a pity if the research project of our own universities were to follow this same pattern. Our universities should be researching the most vital issues of today. If they are not they are missing a real opportunity to contribute to ideology and progress. (p. 142)

Riall, N. (ed.). (1976). Yagl- Ambu: Papua New Guinea Journal of Social Sciences and Humanities, 3 (3). Port Moresby. UPNG Press.

The spirit of independence, fueled by the recommendations of the Committee of Enquiry into University Development (1974), encouraged leading aspirants to organize a seminar which would discuss the roles of universities in PNG. Among the organizers and participants were Honorable Mr. Somare (then Prime Minister of the country); Fr.John Momis, (the Father of PNG's Constitution, and later one of PNG's Deputy Prime Ministers); Mr Ignatius Kilage (one-time PNG's Chief Ombudsman and now PNG's Governor General); and Mr. Alkan Tololo (then Secretary for the National Department of Education and Chancellor, at different times, of the two universities).

Relevant goal-excerpts and views of each author are presented in Table 7.4 .

Table 7.4
Goal Excerpts--Yagl- Ambu: (1976)

Goal Excerpts	Related Goals
The following quotations are attributed to Gris.	
"I believe that the roles of universities are fairly well summarized by the Oldfield aims. They are:	
(1) Provide for the service of PNG, suitably qualified people with appropriate outlooks, skills and attitudes to life;	Manpower Development (Vocational Preparation)
(2) Coordinate its effort with those of other institutions so that the national resources for education and those of neighbouring countries can be distributed most rationally;	(Accountability/ Efficiency)
(3) Provide as a corporate body through groups or through individuals, independent comment and advice which will be critical, constructive, objective and responsible on all aspects of life in PNG;	(Social Criticism /Activism)
(4) Create an understanding among the people of Papua New Guinea with regard to the position of, and roles to be played by their nation in the outside world;	(Humanism /Altruism)
(5) Give priorities to and foster research appropriate to PNG, related to plans for national improvement and the research, made freely accessable;	(Research)
(6) Establish lines of communication with the general population especially village communities and facilitate effective interaction at all levels of society to avoid unnecessary elitist stratification within it;	(Social Egalitarianism)
(7) Help to increase the participation of women in economic and social life of the country;	(Social Egalitarianism)
(8) Create a community with an academic and social character which will give maximum enrichment to the lives of students individually and collectively during their university experiences and increase their capacities to serve the nation;	(Community) (Intellectual Aesthetic Environment)
(9) Achieve the highest possible level of excellence in learning and in pursuit of the stated aims, having special regard to the needs of PNG with the flexibility and independence of mind which will serve and guide their nation in a rapidly changing world" (p.154).	(Academic Development) (Intellectual Orientation)

Continued

Table 7.4 (cont.'d)

Goal Excerpt--Yagl-Ambu 1976

Goal Excerpts	Related Goals
" Perhaps the most important and difficult role which UPNG can and must play is to sensitize or promote social consciousness in its students and graduates to the problem of human existence, development and underdevelopment within this nation and between nations; . . . . It is my belief that UPNG can be an instrument of development and not exploitation through creating a social awareness in its students and graduates which would assist them to advise their leaders or make decisions that will promote the interests and welfare of the majority of the people and not only their own " (p. 156).	(Social Egalitarianism)
Kilage expressed the following. " I say there is a need, a place for some critics in a society. I'd like to see people in the University acting as a conscience of the nation. And that conscience sometimes might bother academics and even the students but it is good to have people in the nation who have conscience and such institution like this [university] should act as a conscience" (p.185).	(Social Criticism/ Activism)
"Those critics need to be within the society they are criticizing provided they are not held aloof from the common society [that] they may know what they are talking about. But the critics should have things to put in the place of what they pull down. . . . Once you pull a house down you have to build something up because people don't sleep under the grass. . . . When you criticise for the sake of criticism, I think that is not worthy of this institution" [the university] (p. 187).	(Humanism /Altruism) National Well-being (Social Criticism / Activism)
"The university would be useless if it does not produce people who can think and save the future of the nation.... I am telling you now that you won't be able to do that creative thinking when in government circles. You will have to start doing it now because now is the time to think, now is the time to plan and now is the time to put your proposal to the government" (p.186).	(Intellectual Orientation) (Academic Development)

Continued

Table 7.4 (cont.'d)

Goal Excerpt--Yagl-Ambu 1976

Goal Excerpts	Related Goals
The following quotations are cited from Momis .	
" If we have ears to hear and eyes to see, it is very clear what the old men and women in the villages are saying to us: 'What are you going to do for us before you burry us?' Today I think the greatest sin committed by mankind is a social sin. It is a sin against society. It is sin by institutions, by legalize institutions. It's institutionalized sin which is promoted by the so called protectors of the people, that nobody will take a stand against them. This is where an institution like this, (the university) a very expensive public institution paid for by taxpayers, should not, I believe, be seen as a factory to produce the manpower requirements of the government and private enterprise but should be a kind of centre for concern where young people are equipped to perceive issues and . . . to be responsible critics of the government" (pp. 189-190).	(Social Criticism / Activism) (Humanism /Altruism) (Social Criticism/ Activism)
" I believe the university should be helping to equip people with the necessary intellectual perception to identify the real needs and aspirations of our people, and to have enough moral courage to make difficult decisions to redirect institutions. We should not be too worried about establishing or keeping the criteria by which westerners or other countries measure their development or progress. If we are really committed to our own values, if we are really committed to our own identity, then we should be proud to set up our own criteria to measure our own progress and development " (p.192).	(Intellectual Orientation) (Academic Development) National Well-being (Intellectual Orientation) (Academic Development) National Well-being
The following quotations are cited from Mortimer. " The university is not like a workshop or an army; it does not respond to orders like a discipline platoon. It has to go through its democratic procedures, and it has to give proper considerations to the impact of changes upon a whole range of people, particularly existing students and staff and future students and staff . . . . With regard to staff statements on public issues, I think the government has to accept the fact that the university does not and	Freedom

Continued

Table 7.4 (cont.d)

Goal Excerpt--Yagl-Ambu 1976

Goal Excerpts	Related Goals
should not exercise control over the opinion of its staff members . . ., the right of free speech carries with it the right to say the wrong thing and even members of the Government should be quite aware that such a failing is not confined to University staff. . . . I agree the university staff have an obligation to develop in students positive traits such as humanism, love of country, obligations toward the community , love of freedom and justice" (p. 173).	(Democratic Governance) (Freedom) (Social Criticism / Activism) (Humanism/ Altruism) National Well-Being (Freedom)
Nekinch argued, "One of the prime function of the university is to produce high level manpower for the nation" (p. 182).	Manpower Development (Vocational Preparation)
The following quotations were expressed by Somare during the seminar. " What are the responsive roles of a university in Papua New Guinea? I believe they can be divided into three categories: education; research; and the role which students take up with particular enthusiasm -- national consciousness and criticism. . . .	(Academic Development) (Research) National Consciousness and (Social Criticism/ Activism)
A university contributes towards good government in the way that it contributes towards expertise in commerce and industry, finance, public administration, law and technology. A man or woman with a trained mind has the ability to contribute more to the country.	(Intellectual Orientation) (Academic Development) National Development
Graduates from the universities will take a direct role in putting into action the plans for tomorrow . . . . This does not mean that the university is the tool of the government or subservient to political pressure. On the contrary, a university must fight to safeguard its academic freedon and its right to question. But in saying this I also believe that a university and university people must have a sense of national responsibility.	(Freedom) (Social Criticism / Activism)
The second role of our university is research. Papua New Guinea has been a paradise for the research worker. Anthropologists, sociologists, environmentalists, have examined our people, our land, our history, our culture, our wildlife under the microscope . . ., drawn their conclusions,...and gone away leaving us with feelings of inferiority or superiority. It would be a pity if the research projects of our own universities were to follow this same pattern. Our universities	(Research) Papua New Guinea Ways

Continued

Table 7.4 (cont.'d)

Goal Excerpt--Yagl-Ambu 1976

Goal Excerpts	Related Goals
should be researching the most vital issues of today. If they are not, they are missing a real opportnity to contribute to ideology and progress" (p.142).	
"The university itself can act as a medium to reflect the conviction of our people. But in order to do this the university must not isolate itself. Other universities have found new impetus and unexpected source of vitality in adult courses . . . many carried over the radio. I believe this should be part of the universities reference, so that the institution can put its roots down from the lofty heights of academic achievement, and draw vitality and strength from direct communication with the people of the country it serves" (p.142).	(Off-Campus Learning) National Consciousness
The other role of a university and its students, is its action as a conscience or critic of government.... There is no doubt that properly used, the demonstation is a vital tool of democracy... Demonstrate by all means, but make sure your protests are conducted sincerely and responsibly if you wish to be taken seriously" (p. 143).	(Social Criticism/ Activism)
The following excerpts are quoted from Tigilai . "As I understand it, the university is an autonomous institution created by government legislation to teach and carry out research. . . . The university has a number of roles to play: to teach; to carry out research; to contribute to national growth; and to comment on society. Fundamental to its ability to carry out these roles is the need for it to be independent or some people prefer the word autonomous" (p.163).	(Academic Development) (Research) National Development or National Well-Being (Social Criticism / Activism) (Freedom)

Continued

Table 7.4 (cont.'d)

Goal Excerpt--Yagl-Ambu 1976

Goal Excerpts	Related Goals
The quotations cited below are from Tololo.	
" The relation between the government and the university ought to be a cooperative one. One in which the government asks. . . the university to accept the role and responsibility of educating its highest level manpower. If the university cannot carry out its part of the cooperative relationship . . . if it becomes actively involved with other issues - social, political, economic, than that of educating the nation's highest level manpower, then it is not fullfilling a useful function and ought to be closed" (p.161).	Educate the nation's highest level manpower (Vocational Preparation) (Public Service)
"As an institution of society a university has responsibility to that society which is not only or merely or properly discharged by the so called right to freedom . . . freedom to do what they like, when they like and how they like. . . they say that role (freedom) is to provide arguments, criticism and ideas independent of (or in opposition to) the government of the day. . . . This is where the situation becomes difficult . . . . I say this because there is a difference between freedom and licence. To me real freedom involves responsibility and we see all too little of this in the world today particularly in our universities" (p.161).	(Freedom) with responsibility
" The government asks the university to accept the role and responsibility of educating its highest level manpower. Educating in a certain sort of way, what I would call sceptical analytical and critical way " (p.161).	Manpower Development (Vocational Preparation) (Intellectual Orientation) (Academic Development)

The following summarizes the main goals articulated in table 7.4. Gris (1976), then Vice Chancellor of UPNG, endorsed nine objectives perceived as important goals for any universities in the country. They include manpower development, accountability/efficiency, social criticism/activism, research related to national development, humanism/altruism, community and cultural/aesthetic awareness, social egalitarianism, intellectual aesthetic environment, academic development and intellectual orientation. These goals reflected those articulated by the Committee of Enquiry into University Development (See Table 7.3) chaired by Gris.

Kilage (1976) argued that social criticism/activism was an important role for universities in PNG. He emphasized the country's needs for some critics in the society, but suggested that such criticisms must be made responsibly with appropriate alternatives to improve the social conditions of the people. The writer further stressed that academic development and intellectual orientation were important university goals.

Momis (1976) debated that "universities should not be factories to produce manpower requirements for the government and private enterprise" but rather, "centers,. . . where young people are equipped to assess situations, are equipped to perceive issues and equipped to be responsible critics of the government" (p. 189). He argued that senior citizens needed the service of their young and educated people to represent their aspirations, and he urged that universities contribute to such need by developing students' academic and intellectual skills.

Mortimer (1976) concurred that universities have obligations to promote humanism/altruism, patriotism, and national-well-being, but argued that universities, as organizations, have little authority over individual staff and over their rights to freedom of speech and academic freedom. Other relevant university goals cited by Mortimer included public service and social criticism/activism.

Mortimer's view of unlimited freedom for staff and students challenges those presented by Somare (1976) and Tololo (1976). While Mortimer believed in unlimited freedom, Somare and Tololo perceived promotion of freedom without social responsibility to be inappropriate in PNG universities.

Nekinch (1976) perceived the primary role of universities in PNG to be that of producing high-level manpower for the nation. This view generally reflects the goals of vocational preparation, advanced training, academic and individual development, and intellectual orientation.

The country's first Prime Minister, Honorable Michael Somare (1976) suggested that the roles of universities in PNG were to educate (teach), do research, act as conscience of the nation (social criticism/activism), be of service to the public, and promote national consciousness.

National consciousness, despite its unclear definition, appears as an overriding theme in Tololo (1976) and Somare's (1976) discussion. Both writers suggest that while universities in PNG are at liberty to pursue their traditional goals of research, academic freedom and teaching, such goals must be consistent with the nation's political aspirations.

Somare (1976) added that the goals of academic development, "appropriate" intellectual development of individuals, and academic freedom "with responsibility" are other important goals for universities and explained that these goals enhance private enterprise and good government.

According to Somare (1976), criticism of government policies (social criticism/activism), is generally an effective tool in any democratic society but the Prime Minister cautioned that it must be used responsibly and sincerely to serve the people's best interest.

On the subject of research, Somare called for commitment by the universities to promote research that would contribute to the development of "Papua New Guinean Ways," national well-being and patriotism among the people. He urged the universities to come down from their "lofty heights" and reflect the social convictions of Papua New

Guineans, by reaching out to those who have little access to university education through extension studies programs (off-campus learning).

Tigilai (1976) repeated the national well-being function as a basic reason for establishing universities in PNG but argued that such a function can be acquired only if the universities' autonomy and freedom were respected. He reiterated the universities' traditional roles of teaching, research, social criticism and endorsed the goals of intellectual and academic development.

Tololo (1976) articulated the need for the universities to provide advanced training for Papua New Guineans. He suggested that such training must be "skeptical, analytical and critical" (p.161) in their approach thus implying that manpower development or vocational preparation, academic development, intellectual orientation, advanced training and research are significant university goals.

In sum most writers seem to suggest that goals which generally aspire toward social and national needs and aspirations are significant for universities in PNG. Writers generally confirm traditional university goals but varied in the degree of emphasis for each one. Tololo (1976), Tigilai (1976) and Nekinch (1976) stressed national manpower and vocational preparation goals. Somare (1976), Kilage (1976) and Momis (1976) emphasized intellectual orientation, academic development, social criticism/ activism, individual personal development and research.

Somare (1976), Tololo (1976), Kilage (1976), Momis (1976) suggested that freedom in PNG universities must be licensed by social responsibility and supplemented with credible alternatives. The authors questioned freedom without responsibility in a context where the majority of the population are uneducated and dependent on advise from their young and educated people. Somare (1976), Tololo (1976), Kilage (1976), Momis (1976) imply that universities are institutions of a society and are accountable to the society for their actions.

The seminar provided opportunities for clients to share ideas on priorities and direction for universities. It offered university administrators and planners insights into national aspirations and directions that leaders perceived for the universities but offered little in the way of new goals. Most mentioned goals reflected common university goals observed in the IGI instrument.

Papua New Guinea Institute of Technology. (1976-79). Annual Reports and Financial Statements. Lae: Papua New Guinea University of Technology.

According to section 15 of PNG's Public Bodies and Financial Administration Act, public institutions including the universities, must prepare annual reports on their progress and financial expenditures to respective Ministers of State, as evidence of the institutions' effectiveness and their contribution to national development.

Such requirement is often met through publication of institutional annual reports and financial statements by institutions. The reports would normally begin with the statement of aims and proceed to outline various institutional developments based on articulated aims.

In examining the 1976-79 Annual Reports and Financial Statements of the Papua New Guinea Institute of Technology (now The Papua New Guinea University of Technology), two statements were repeatedly observed as significant aims for PNGUT. These are reproduced in Table 7.5 .

Table 7.5

Goal Excerpts-- Annual Reports and Financial Statements of PNGUT 1976-79

Goal Excerpts	Related Goals
" The university aims to provide tertiary educational facilities. . . to qualified men and women able to play an important part in the development of Papua New Guinea . . .	Manpower Development (Vocational Preparation)
. . .the university provides service courses which are designed to bring students to the necessary level of academic development before they commence their specialized professional courses " (pp. 5-8).	(Academic Development) (Intellectual Orientation) (Vocational Prepapration)

The statements in Table 7.5 emphasize intellectual/aesthetic environment, academic development, intellectual orientation, vocational preparation, and national well-being, as important goals of PNGUT.

As official reports to the Minister for Education and the Government, these statements portray official goals of the university. They set limits for planning and development in the institution and are accepted justifications for past and future programs and expenditures. Consequently their impact on the university would be quite significant in that all programs must show some relationship with the stated goals.

Documents Published in the 1980s

This section presents relevant articles published in the 1980s and follows the same presentation format used in earlier sections of this chapter.

Papua New Guinea Government. (1980). The University of Technology Act 1980. Port Moresby: Papua New Guinea Government Press.

The Papua New Guinea University of Technology Act 1980, superseded the Papua New Guinea University of Technology Act 1973, the Papua New Guinea Institute of Technology Ordinance 1970, and the Institute of Higher Technical Education Ordinance 1965. This document represents the legal and official objectives of the university and is the primary source for the institution's official aims and objectives.

The Objects of PNGUT as expressed under section 5, subsections 1 and 2 of the Papua New Guinea University of Technology Act 1980 are presented in Table 7.6. Table 7:6 shows that the PNGUT Act emphasizes intellectual/aesthetic environment, intellectual orientation, academic development, research, off-campus learning and manpower or vocational preparation of students in technical branches of learning. The Act is a primary document which provides the broad purpose for other institutional regulations and official statements of the university such as those observed in the Annual Reports and Financial

Statements. Consequently the impact of the Act and the goal statements therein on developments at PNGUT would be greater then most goal statements expressed in other documents. For example, current and future university programs based on the Objects of the University will likely draw government financial and political support.

Table 7.6

Goal Excerpts- The Papua New Guinea University of Technology Act 1980

Goal Excerpts	Related Goals
" The Objects of the University include- (a) the encouragement of, and the provision of facilities for, study and education in technological subjects at tertiary level; and	(Intellectual Aesthetic Environment)
(b) the giving of instrictions and training in technological branches of learning, and skills at tertiary level; and	(Intellectual Orientation) (Academic Development)
(c) the provision of research into technological branches of learning, and assistence in its practical application; and	(Research)
(d) subject to the Statutes, the awarding and confering of degrees, diplomas, certificates and other academic honours;	
(e) the provision of facilities for technological education throughout the country by-	(Intellectual Aesthetic Environment)
(i) affiliation with educational institutions; and	(Accountability / Efficiency)
(ii) the establishment of - (A) tutorial classes; and	
(B) correspondence classes; and (C) extension classes; and (D) vacation classes, and by such other means as the Council thinks appropriate; and	(Off-Campus Learning)
(f) liason, collaboration and reciprocation with other institutions of learning and training whether within or outside of the country in-	(Off-Campus Learning)
(i) the provision of facilities; and (ii) the recognition of degrees, diplomas and certificates and other status; and	(Intellectual Aesthetic Environment)
(iii) the interchange of staff, students and information, and in other ways not inconsistent with its status as the University " (p. 6).	(Accountability / Efficiency)

Lohia, R. R. (1980). The Educational Roles of the University of Papua New Guinea. Unpublished Paper presented at a conference on Education in the Pacific Region at University of Victoria, British Columbia.

The Educational Roles of the University of Papua New Guinea. (Lohia ,1980) represents the views of one of UPNG's Vice Chancellors. These views were expressed in an international conference on "Education in the Pacific Region." Relevant excerpts related to university goals are reproduced in table 7 7.

Table, 7.7
Goal Excerpts-- Educational Roles of the University of Papua New Guinea-Lohia 1980

Goal Excerpts	Related Goals
"University . . . is regarded as an universal institution which must reach out to the whole world through its research into the frontiers of knowledge, its teaching of accumulated knowledge and wisdom - improving the quality of life and helping to save the future of humankind for the better" (p.14).	Promote Rational Enquiry (Research) Promote Mutual Respect (Humanism/ Altruism)
"There is an obligation on the part of those who are involved with the university to search for truth and honesty at all times. . . it is a commitment to be intellectually honest, deligent, and to aim with zeal for academic excellence	(Research) (Intellectual Orientation) (Academic Development)
There is an obligation to recognize that every member of the university is an individual, different and unique in his/her own right . . . has equal rights and guarantees regarding thoughts, beliefs, expression and movement under the constitution of PNG. . . .	(Individual Personal Development) (Social Egalitarianism)
The exercise of anyone's freedom is cleary limited by mutual respect. . . .	(Freedom)
There is an obligation to have committed loyalty to the Objects and Statutes of the University Act by all who have accepted membership as students or staff. . ." (p.15).	Loyalty to the University (Community)
"Goals of third world universities. . . includes the development of all resources for the improvement of the quality of life in human societies" (p.17).	(Social Egalitarianism)
"The universities in the third world are expected to examine the societies they serve and help transform them for the general good and welfare of all their members" (p.18).	(Social Criticism/ Activism)
"They are also expected to help 'extend the frontiers of knowledge through research. . .	(Research)
Help develop members of a society to be critical and constructive in their thinking and make them productive members of the society. . . . Help develop individuals to cope with the demand of the rapidly changing world. ' To maintain and further develop the cultural heritage of the society. . ." (p.18).	Social Criticism/ Activism (Social Egalitarianism) (Individual Personal Development) (Cultural Aesthetic Awareness)

Continued

Table 7.7 (cont.'d)

Goal Excerpts--Educational Roles of the University of Papua New Guinea (Lohia, 1980)

Goal Excerpts	Related Goals
University education in Papua New Guinea is guided by the government's Eight Point Plan and five major Principles. Lohia also confirmed the goals expressed by Gris, (1976)-- see table 7.3-- in this chapter.	Decentralization Rural Improvement (Social Egalitarianism)
"Goals of universities in PNG	
Since its inception the university has been concentrating on producing generalists through its undergraduates degrees" (p.25).	(Individual Personal Development)
"Research is vital for the development and appropriate orientation of university programmes to the needs of the society it serves. Emphasis is placed on the short term and long term applied research. . . .	(Research) (Academic Development) (Intellectual Orientation)
University is a public institution, therefore it must have the duty to serve the public at large. However the service should not be imposed on the public. The people. . . should request for the appropriate service from the university.	(Public Service) (Accountability / Efficiency)
University education must reach more people throughout the nation by combining academic studies with work in the community" (p. 25).	(Individual Personal Development) (Social Egalitarianism) (Off-Campus Learning)

According to Lohia (1980), academic development, individual personal development, freedom, community, research and cultural/aesthetic awareness are appropriate goals for universities in the third world.

In reference to universities in PNG, Lohia (1980) cites the national goals, directive principles and the eight point plan as primary reference for universities, when developing their institutional goals. Lohia (1980) repeated the goals expressed by the Committee of Enquiry into University Development (1974), as relevant for universities. Social egalitarianism, accountability/efficiency, teaching, research, individual personal development and public service were among the cited goals.

Lohia (1980) suggested that universities in PNG should pursue their traditional goals but concurs with Gris (1976), Kilage (1976), Momis (1976), Somare (1976) and Tololo (1976) that such goals should relate closely to national needs.

Lohia's status as Dean of Education, Deputy Vice Chancellor, and Vice Chancellor at UPNG, imply that his goal perceptions would have some impact on UPNG's direction in the late 1970s and early 1980s. The establishment of Provincial University Centers in three provinces in the early 1980s is an example of his emphasis on such goals as individual personal development, public service, intellectual orientation and academic development and off-campus learning for Papua New Guineans.

Papua New Guinea Government. (1983). The University of Papua New Guinea Legislation 1983. Port Moresby: Papua New Guinea Government Press.

The period from 1966 to 1975 represented rapid growth and development at UPNG as the university attempted to meet localization demands posed by self-government and independence. The post-independence period (1976-83) was, however, marred by frequent student unrest as the institution attempted to adjust to its indigenous environment and various client demands. An example of such unrest was the 1978 incident where staff and Council members were physically assaulted by students, who also caused damage to university property.

A Committee of Inquiry into Unrest at the University of Papua New Guinea in April and May 1978 and Other Related Matters (White, Lapiso, Diro, 1978), recommended that the 1964 UPNG legislation be revised to address the needs of the new state and to deal with issues affecting the university, particularly student discipline. A new UPNG Legislation was subsequently drafted by a committee of Council and passed by Paliament in 1983.

The Objects of UPNG as expressed under section 5 and 6 of the Act are reproduced in Table 7.8.

Table 7.8

Goal Excerpt-- The University of Papua New Guinea Act and Statutes 1983

Goal Excerpts	Related Goals
"Part II: Section 5. (1) The University shall be dedicated to the pursuit, advancement, and dissemination of knowledge, understanding and wisdom.	(Academic Development) (Intellectual Orientation)
(2) In pursuing the objectives specified in Subsection (1), the university shall be mindful of the manpower and other needs of Papua New Guinea and shall endeavour, by the example of its corporate life, academic achievement and professional excellence, to promote national well-being and progress. . . .	(Vocational Preparation) (Intellectual Aesthetic Environment) National Well-Being or National Development
Section 7. The University shall have the following powers: (a) to grant such degrees, as are authorized by the Statutes and such diplomas, certificates and other academic awards as it may determine;	(Accountability / Efficiency) (Freedom)
(b) to provide instruction and facilities for study, education and research to persons registered as preparing for degrees, diplomas, certificates or other awards of the University.	(Intellectual Aesthetic Environment)
(c) to provide for extra- mural study and continuing education to persons, whether members of the University or not, in such fields and in such manner as the University may from time to time determine; and	(Off-Campus Learning) (Innovation)
(d) to co-operate in pursuance of any of the objects of the University with any other bodies or persons and to enter into agreements authorized by Statues with institutions for their association with or incorporation in the university; and	(Freedom)
(e) to appoint academic administrative and other staff on such terms and conditions of service as the University may determine; and	(Intellectual Aesthetic Environment)
(f) to provide for promoting the health and general welfare of the students of the University, including the establishment and supervision of residences,	(Community)
(g) to regulate and enforce discipline among the employees and students of the University by such measures as the University may determine; and	(Community)
(h) to cancel, annul or revoke any act or thing in the exercise of these powers; and	(Freedom)
(i) to do all such acts or things as may be done under the provisions of this Act or may be conducive to the exercise these powers or to the attainment of any of the objects of the University" (pp.3-4).	(Freedom)

The Act specifically mentions research, teaching, academic development, intellectual orientation, manpower development and national well-being as the primary goals of UPNG.

The legislative status of the Act commands significant influence on future directions of the university. For example it guarantees: (1) continuity through a longer term of office for chief executives; (2) greater public representation in the Governing Council; and (3) it acts as a guideline for future developments in the university. Further, future developments in the university must be based on goals stated in the Act.

Ultimately the new Act would likely lead to long term stability, planning and development in the university. Public representation on the university's Council may lead to better public understanding of the university and promote client-confidence in the institution.

Rogers, C. (1983): The Working Party on University Priorities Staffing and National Resources. Port Moresby: The University of Papua New Guinea Press.

The international financial crisis and cuts in Australian aid to PNG decreased the country's spending powers and forced the government to review public expenditures. Consequently the universities were forced to re-evaluate and phase out unproductive programs. The Joint Working Party on University Priorities, Staffing and National Resources, (1983) was commissioned by the Councils of UPNG and PNGUT to enquire into matters relating to university priorities, staffing and allocation of resources. Excerpts of the Working Party's recommendations to the universities' councils are presented in Table 7.9 .

Table 7.9

Goal Excerpts-- The Joint Working Party into University Priorities Staffing and National Resources 1983 (Rogers Report)

Goal Excerpts	Related Goals
"Because of increasing cold winds of financial austerity, it is recognized that universities must be responsive to national priorities and that the state must have a major say in setting them" (p.11).	(Acccountability/ Efficiency)
"In an open society, universities. . . set their priorities for programmes and subjects in an attempt to respond to the felt needs of the society" (p.13).	(Social Egalitarianism) (Public Service)
"The Universities have purposes moulded by history and protected by tradition-to pursue, advance and disseminate knowledge, understanding and wisdom. But there can be no gain saying that before and today, a principal purpose is to produce most of the nation's high level manpower. The task, always of much complexity is to gear the university's present work to the anticipated needs of the society, say, ten to fifteen and more years hence" (p. 14).	(Academic Development) (Intellectual Orientation) Manpower Development (Vocational Preparation) (Advanced Training)
"A significant recent development has been the appearance of the first National Manpower Assessment. . . . It now seems clear that the universities' priorities set in consultation with the government must be tuned to the new manpower assessments and their revisions" (p.14).	(Vocational Preparation) National Needs and Well-Being

The Working Party (1983) reiterated goals expressed by the Committee of Enquiry into University Development (1974), Gris (1976), Kilage (1976), Somare (1976), Tigilai (1976) and Tololo (1976). The Party endorsed the traditional goals of teaching, research and public service but strongly emphasized that universities must function in association with the government and its manpower needs.

The Party (1983) also argued that institutional accountability and efficiency in time of financial austerity must be given due consideration and university priorities, must be set in partnership with the national government. The Working Party established a program-effectiveness criteria based on staff to student ratios across faculties in both universities (accountability/efficiency) and recommended that programs which did not meet the criteria be terminated and resources distributed to other programs believed of relevance to national development.

The Working Party concluded that the " principal purpose of universities in PNG was to produce most of the nation's high level manpower" (p. 14) and university programs and subjects should be set in response to the felt needs of the society.

Papua New Guinea Government. (1984). The PNG Constitution. Port Moresby: Papua New Guinea Government Press.

The Constitution of the State of PNG is an elaboration of the national goals and their associated principles (See Chapter 2). The constitutional implications for the universities were discussed in detail by the Committee of Enquiry into University Development (1974). Nevertheless the national goals are presented in Table 7.10, as they appear in the constitutional document.

Table 7.10

Goal Excerpts-- PNG Constitution 1984 (Abridged)

Goal Excerpts	Related Goals
National Goals and Directive Principles "We hereby proclaim the following aims as National Goals and direct all persons and bodies, corporate and unincorporate to be guided by these our declared directives in pursuing and achieving our aims:	
1.Integral Human Development. We declare our first goal to be for every person to be dynamically involved in the process of freeing himself from every form of domination or oppression so as to develop as a whole person in relationship with others.	Integral Human - Development (Individual Personal Development)
2. Equality and Participation. We declare our second goal to be for all citizens to have an equal opportunity to participate in, and benefit from, the development of our country.	Equality Participation (Social Egalitarianism)
3. National Sovereignty and Self Reliance. We declare our third goal to be for Papua New Guinea to be politically and economically independent, and our economy to be basically self-reliant.	National Sovereignty and Self- Reliance (Individual Personal Development)
4. Natural Resources and Environment. We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.	Effective use of and preservation of natural resources and the environment (Accountability/ Efficiency)
5. Papua New Guinean Ways. We declare our fifth goal to be to achieve development primarily through the use of Papua New Guinean forms of social, political and economic organizations" (pp.2-5).	Papua New Guinean Ways

The national goals as written in the Constitution reflect some of the goals defined in the IGI. For examples, integral human development involves the development of an individual's intellect. It accounts for his particular needs and aspirations relative to that of his society. These interpretations are similar to the definition of IGI goal of individual personal development.

Equality and participation (sect. 2. 1-12.) reflect the social egalitarianism goal. The goals of national sovereignty and self-reliance (sect. 3. 1-8) call for independence from all forms of domination which implies development of an independent and creative intellect and self-confidence. The inter-relationships of goals such as intellectual and academic development, and individual personal development is evident . The constitutional right to natural resources and the environment calls for effective and efficient use of all forms of resources to the benefit of all. This, in essence, represents the goal of accountability/efficiency. It can be concluded that PNG's national goals and directive principles are generally congruent with some IGI goals.

The Constitutional goal --Papua New Guinea Ways-- however, appears unique to PNG. It calls for utilization of Papua New Guinean ways in all forms of social, economic and cultural developments in the country. But Papua New Guinea Ways are numerous and undefined, and are likely to challenge established university traditions.

The Constitution plays a leading role in guiding developments in PNG and must therefore influence university goals. The legality of the document alone has far-reaching implications for universities nationwide.

Parry, D. (1984). Higher Education : Issues and Options Port Moresby: Commission for Higher Education.

The 1980s will be observed as a period of revision and rationalization of university and higher education in PNG. As part of the higher education rationalization process, Parry (1984) examined issues and options in university education and cited relevant goals for the universities. Related excerpts are presented in Table 7.11.

Parry repeated that the primary functions and purposes of universities were teaching, research, public service, academic development, intellectual orientation, cultural/aesthetic awareness, and manpower training or vocational preparation, but he warned that while these are legitimate functions of all universities, unrealistic expectations by clients for immediate benefits from young institutions in a turbulent environment, may compromise long term goals. Parry (1984) argued that in such an environment, universities must be prepared to be increasingly accountable to that society.

Table 7.11

Goal Excerpts--Higher Education: Issues and Options
(Parry 1984)

Goal Excerpts	Related Goal
"They [the universities] have been required. . . [to] contribute to the achievement of the objective of maintaining a balance in the production of high level manpower supply between the different categories of strategic manpower. At present manpower development is seen by the government as the major purpose of universities in Papua New Guinea" (p.36).	Manpower Training (Vocational Preparation)
"Their roles as centres of research, scholarship and cultural development have yet to be fully understood and accepted outside the university. Yet they are known internationally as the hall marks of a true university" (p.37).	(Research) (Academic Development) (Intellectual Orientation) (Cultural Aesthetic Awareness)
"In addition to teaching and research, academic staff in universities are also in a position to undertake consultancy work. This involves contact with particular sections of the labour market most closely related to their disciplines" (p.37).	(Public Service)
" . . . whatever guiding principles, [university] policies are based on, the. . . sector as a whole must be prepared to be increasingly accountable for its performance" (p.40).	(Accountability/ Efficiency)

Increased emphasis on accountability and efficiency (Parry 1984, Working Party 1983) compounded by the international financial crisis led to the decision of the Wingti Government to endorse a rationalization strategy for higher and university education.

University of Papua New Guinea. (1984). The University of Papua New Guinea Calendar 1984-85. Port Moresby: University of Papua New Guinea Press.

The University of Papua New Guinea Calendar is the official handbook of that university. As such, the Calendar (1984-85) outlines university objectives cited in the University of Papua New Guinea Act and Statutes (1983). Relevant excerpts are presented in Table 7.12.

Table 7.12

Goals Excerpts--UPNG Calendar 1984-85

Goal Excerpts	Related Goals
" 1. The university shall be dedicated to the persuit, advancement and dissemination of knowledge, understanding and wisdom.	(Research) (Academic Development) (Intellectual Orientation)
2. In pursuing the objects specified in subsection 1, the university shall be mindful of the manpower and other needs of Papua New Guinea and shall endeavour by the example of its corporate life, academic achievement, and professional excellence, to promote national well-being and progress" (p.32).	Manpower Development (Vocational Preparation) National Well-Being and Progress.

Goals cited in Table 7.12 include academic development, intellectual orientation, research, teaching, manpower needs (vocational preparation) and national well-being.

As an official document of the University, the Calendar supplements the UPNG Act in which official goals of the University are recorded. The official status of the Calendar places some significance on goals mentioned herein as opposed to others cited in unofficial documents, and such a status can greatly influence clients' perceptions about the roles of that university.

University of Papua New Guinea. (1985). The University of Papua New Guinea : Medium Term Development Plan 1984-89. Port Moresby: University Planning Office.

As a result of the higher education review in the early 1980s (Parry 1984), the National Government's new budgetary procedure (1983), and the Report of the Joint Working Party into University Priorities and Staffing (1983), UPNG established a five year plan for developments in university education from 1984 to 1989. The objectives expressed in the plan are detailed in the Appendix D. A summary of of the objectives is presented in Table 7.13.

Table 7.13

Goal Excerpts-- UPNG: Medium Term Plans 1984-1989*

Goal Excerpts	Related Goals
See priorities # 1, 2, 3, 19.	(Academic Development) (Intellectual Orientation)
See priorities # 4, 9, 20.	(Innovation)
See priority # 5.	(Off- Campus Learning)
See priorities # 6, 12, 14, 18, 21.1, 21.2, 21.3, 21.4	(Intellectual Aesthetic Environment)
See priorities # 10, 15, 17, 21.3	(Community)
See priority # 16.	(Research and Public Service)

*UPNG priority statements cover up to five pages. The statements are reproduced in appendix D to avoid lengthy tables in the text. The priority numbers in the table are the same as those in the document.

A study of priority statements in the plan revealed that four statements relate to the goals of academic development and intellectual orientation, three relate to the goal of innovation, one to off- campus learning, four to the goal of community, and one to the goal of research and public service.

In sum, the document places emphasis on means to achieve the primary goals stated in the University Act and Statutes. The impact of the plan will not be fully appreciated until 1990, following an evaluation of the plan.

Parry, D. (1987). Higher Education Plan: A Strategy for Rationalization 1986-1990. Port Moresby: Commission for Higher Education.

The 1980s continue to be a period for revision, planning and rationalization of higher education in PNG. Parry (1987) discussed some of the issues affecting university education and reiterated relevant functions of universities. These are summarized in Table 7.14.

Table 7.14

Goal Excerpts-- Higher Education Plan: A Strategy for Rationalization (Parry, 1987)

Goal Excerpts	Related Goals
"The functions of universities, it is universally acknowledged, include research, as well as teaching . . .	(Research) (Academic Development)
University plans based solely on manpower training function and taking no account of the university's duty to advance knowledge will . . . result in wrongly funded universities . . .	Manpower Training (Vocational Preparation)
Manpower approaches usually downplay reflective critical studies in the humanities and the sciences. Such studies are however, vital if PNG is to preserve and enhance a distinct identity" (p.5).	(Academic Development) (Intellectual Orientation) (Humanism / Altruism)

Parry acknowledged that the functions of universities are those of research, teaching, academic development, intellectual orientation and social criticism/activism and manpower (vocational) preparation .. However, the author warned that over-emphasis on manpower development may threaten the very essence of a social egalitarian society, aspired to by its leaders.

Parry (1984, 1987) questioned the country's educational policies which subsequently led to the establishment of a Committee on the Philosophy of Education in PNG (Matane, P; Lohia, R; Bengo, P; Jennings, P; Sione, K; Markis, P; Potter, R; Seko, S.; 1987). The Committee on the Philosophy of Education however, emphasized primary and general education over university education and recommended that resources expended on the universities be re-directed toward primary and general education. Other implications of Higher Education Plan 1986-90 will remain unknown until the end of the period.

Parry, D., Dennis, D. J., Duffy, R. W., [illegible]urphy, T. (1987). Advisory Technical Assistance Study on Higher Education in Papua New Guinea. Port Moresby. Commission for Higher Education.

An Asian Development Bank Advisory technical assistance study into higher education in PNG published a five-sectioned report on higher education and related issues. Section 2 of the Report contains relevant goals, objectives, and policies for universities.

The Asian Development Bank Advisory Committee (1987) echoed the objectives cited by the Committee of Enquiry into University Development (1974). University objectives cited by the Advisory Committee were (a) establishment of outreach programs to meet the needs of its clients in distant regions of the country (social egalitarianism, off-campus learning), (b) establishment of study programs which combine work and practical experiences with academic subjects (innovation; accountability/efficiency), (c) a unification of the nation's two universities into a single university (accountability/efficiency).

The Government has yet to endorse the recommendations of the Asian Development Bank Advisory Committee thus minimizing any immediate impact such report may have on university goals and developments.

Summary

This chapter discussed 18 documents related to university education and developments in PNG and identified relevant goals and functions expressed by the authors. Implications of each article for university goals were discussed and relationships of the cited goals with IGI goals were noted.

The data suggest that many of the goals identified in the documents closely parallel those in the IGI instrument. A few goals were unique to PNG. Some goals were repeated and emphasized more than others but the degree of emphasis is undetermined due to the methodological technique used in this chapter. Nevertheless it is assumed that frequency of citings, cross-reference by the authors, and status of the documents, represent relative degrees of emphasis placed on the mentioned goals. Table 7.15 sums up the number of times particular goals were cited.

Several concluding generalizations are drawn from the summary table. First, most goals cited in the literature were IGI-related. The Commission on Higher Education in Papua New Guinea (1964) , the Committee of Inquiry into Higher Education (1971), the Committee of Enquiry into University Development (1974), Gris (1976), Tololo (1976), Tigilai (1976), Somare (1976), Mortimer (1976), Kilage (1976), Momis (1976), Nekinch (1976), Lohia (1980), PNGUT Legislation (1980), UPNG Legislation (1982), The Working Party into University Priorities (1983), UPNG Calendar (1984-85), UPNG Medium Term Plan (1984),and Parry (1984; 1987 a; 1987 b), confirm that academic development, intellectual orientation, social criticism/activism, social egalitarianism, intellectual/aesthetic environment, manpower training or vocational preparation, research,

Table 7.15

Summary (by numerical frequency) of University Goals Cited in the Documents.

Cited Goals	Frequency
IGI Goals	
Academic Development	28
Intellectual Orientation	22
Social Criticism/ Activism	15
Social Egalitarianism	14
Intellectual Aesthetic Environment	14
Vocational Preparation	13
Research	12
Accountability/ Efficiency	10
Individual Personal Development	9
Freedom	9
Community	9
Public Service	6
Off-campus Learning	6
Humanism/ Altruism	6
Cultural Aesthetic/ Awareness	4
Innovation	4
Advanced Training	2
Democratic Governance	1
Meeting Local Needs	0
Traditional Religiousness	0
Unique Goals	
National Consciousness (National Well Being and/ or National Progress)	7
Papua New Guinea Ways	3

accountability/efficiency, individual personal development, freedom, community, public service, off-campus learning, humanism/altruism, cultural/aesthetic awareness, innovation, advanced training and democratic governance are relevant goals for universities in PNG.

Second, some writers, Tololo (1976), Somare (1976), Nekinch (1976), Gris (1976), Lohia (1980), Kilage (1976), Momis (1976), and Tigilai (1976), emphasized that universities must relate their goals toward the principles and aspirations of Papua New Guineans as enshrined in the national constitution. They debate that unless such considerations were incorporated with the goals and purposes of PNG universities, these institutions may not achieve their ultimate function --national development.

Third, academic development, intellectual orientation, social criticism/activism, social egalitarianism, intellectual aesthetic environment, manpower or vocational preparation, research and accountability/efficiency were the most frequently cited IGI goals. Democratic governance, advanced training, Innovation, cultural aesthetic awareness and humanism/altruism, off-campus learning and public service were among the least mentioned goals.

Two goals: national consciousness and Papua New Guinean Ways, cited in the constitution (1[illegible]83), Gris (1976); Kilage (1976); Lohia (1980), Momis (1976); and Somare (1976) were unique to the country. Though cited in fewer articles, the status of the authors in the political and institutional context and the legislative source for these goals are noted and as suggested by Etzioni (1964), Gross (1968, 1969), Gross and Grambsch (1974) and Zald (1963) command high degree of influence over university goals.

One assumes that as prominent leaders, these writers would have great influence as to what goals might or might not be appropriate for universities in the country. Further, these unique goals are cited in the National Constitution, a primary and most important source for all principles of developments in PNG and as such are legally significant.

Comparison of the 11 most cited goals in Table 7.15 with the top 11 actual and preferred goals in Table 5.2 shows that nine of the 11 top goals appear in both tables. In sum, documentary data are generally supportive of the statistical conclusions drawn in chapter 5 and suggest a high degree of similarity between documented PNG university goals and most goals perceived as important by survey respondents.

CHAPTER 8

GOAL ELABORATION

This chapter presents interpretations of interview data. As noted in chapter four, the primary function for data obtained by this method is to supplement information obtained from the questionnaire survey. More specifically the interviews were planned to determine the degree of consistency or inconsistency of data, (2) provide insights as to why certain goals were emphasized by respondents, (3) identify goal-related problems and (4) enquire about possible solutions to the problems from respondents. Consequently, a semi-structured interview instrument (See appendix E) was deployed to achieve these objectives.

The first section presents the interviewees' goal priorities. This is followed by a summary of interpretations, problems and recommendations. A comparison of interview and questionnaire data is made and conclusions drawn.

Goal Priorities

The first step in every interview involved respondents' identification of the top five IGI goals that they believed important for PNG. Each goal rank was weighted (1st= 5 and 5th =1) the sum of which determined the respondents' goal rank order, as presented in Table 8.1. Goals with higher rank scores appear in the top, and goals with lower scores, at the bottom end of the ranking order.

Goal Ranking Distribution

Table 8.1 shows that 18 of the twenty IGI goals were ranked among the top five goals by at least one respondent. However the calculated rank scores indicated that some goals were chosen by more respondents than others. For example, more of the respondents chose intellectual orientation and academic development, suggesting that both goals were significantly important to most interviewees. On the other hand, only one person believed innovation was important enough to be ranked among the top five goals. Other goals such as public service, research, and community were chosen by a good number of interviewees, however, their number was less than those who chose intellectual orientation and academic development.

It is also interesting to note that cultural aesthetic awareness and traditional religiousness were the only goals not chosen by any interview respondents. This is not surprising as both goals were among the two lowest rated goals by survey respondents.

Further study of the rank scores in table 8.1 indicates five goal-clusters: Intellectual orientation and academic development comprise the highest cluster; vocational preparation and individual personal development are the second highest cluster; public service, research, and community occupying the middle cluster followed by social criticism/activism, advanced training, meeting local needs and humanism/altruism cluster. The fifth and bottom cluster includes the goals of democratic governance, accountability/efficiency, freedom, off-campus learning, social egalitarianism, intellectual aesthetic environment and innovation, cultural aesthetic awareness and traditional religiousness.

Table 8.1

Distribution of Interviewees' First Five Goal Preferences

Goal	Rank					Rank Score
	1	2	3	4	5	
	Weight					
	5	4	3	2	1	
Intellectual Orientation	3	13	4	2	1	84
Academic Development	7	5	5	3	0	76
Vocational Preparation	7	1	1	2	3	49
Ind. Personal Development	4	2	4	1	1	47
Public Service	2	1	1	3	5	28
Research	0	0	5	4	2	25
Community	3	1	1	0	2	24
Social Criticism / Activism	0	1	0	4	0	12
Advanced Training	0	0	2	0	5	11
Meeting Local Needs	0	2	0	1	1	11
Humanism/Altruism	1	0	2	0	0	11
Democratic Governance	0	1	0	2	0	8
Accountability/Efficiency	0	0	0	2	4	8
Freedom	0	1	0	1	0	6
Off-Campus Learning	0	0	1	0	2	5
Social Egalitarianism	0	0	1	1	0	5
Int. Aesthetic Environment	0	0	0	2	1	5
Innovation	0	0	0	0	1	1
Cult. Aesthetic Awareness	0	0	0	0	0	0
Traditional Religiousness	0	0	0	0	0	0

The clusters represent a loose ranking of goals by frequency of mention, but should not be taken as definitive priorities for PNG. These goals ,however have been singled out by interviewees for further elaboration.

Interpretations, Problems and Recommendations

This section presents respondents' interpretations, perceived problems and recommendations relating to the goals selected by interviewees. Comments were not received for every goal. Tables 8.2 to 8.10 each focuses on one goal and contains a summary of comments. Numbers in parentheses indicate frequencies of mention, if more than once.

Table 8.2
Respondents' Comments on Goal: Intellectual Orientation
(23 Respondents)

Interpretations

An attitude that accepts knowledge as a valuable commodity for personal and national development. (15)

"Papua New Guineans must understand that intellectual growth is part of an individual. And an individual must have a thirst for learning. He must continue to pursue knowledge by developing his research skills and techniques to generate new ideas and solve problems."

A learning process that begins during childhood and continues throughout life. (11) "There has to be a commitment to life-long learning."

Problems

PNG university students come from multi socio-cultural backgrounds which have little association with formal university learning experiences and concepts. (17)

Basic learning and thinking skills, otherwise common in western contexts are challenges to PNG students. (10)

Students have less than twelve years of formal education prior to admission at a university. Given other subject demands, and the system's inability to teach intellectual skills at primary and secondary levels, teaching of study skills at university level suffers due to limited time. (6)

"Various curriculum requirements during a four-year program do not allow us to be flexible with curriculum contents. We are always strapped for time."

Recommendations

Curriculum and learning methods in universities and the education system should be revised to emphasize research skills and intellectual learning activities. (18)

Universities should emphasize courses in basic research skills and encourage students to conduct research on issues affecting local communities. (15)

The education system should emphasize teaching techniques that encourage questioning skills and critical enquiry. (12)

Table 8.3
Respondents' Comments on Goal: Academic Development
(20 Respondents)

Interpretations

Maintenance of intellectual excellence in universities. (16)
" Universities should set a level of academic excellence and encourage all staff and students to work toward that level. We have to take students from where they are and educate them to the level we have set ."

Acquisition of indepth knowledge in a discipline. (12)

" We have got to produce people who know their stuff technically and be able to perform well in their jobs."

" We have to help people to gain indepth knowledge; to pursue an idea, grasp its intellectual concepts and broaden their knowledge of the subject in a particular field."

Preparation of students for advanced scholarly studies. (10)
"Academic development must be perceived in its broadest sense. Development of this goal in students should surpass the "here and now" and prepare them for the future."

"The university not only prepares people for a narrow vocational career, but provides students with opportunities and skills to undertake scholarly studies."

" There is also the role of preparing students to acquire a broad base of knowledge which would help them to academically progress to higher learning and further studies. We must see a student as one who is likely to go on to the top and to prepare him accordingly."

Problems

Some university teachers encourage inappropriate teaching and learning methods . Rote-learning and "spoon feeding" are two examples. (17)

Diverse tribal, social and rural experiences of students conflict with modern scientific facts and concepts taught at universities. (6)

Traditional PNG experiences and values are barriers to the public and government's understanding of universities' role in academic development . (9)

Recommendations

Introduce teaching and learning methods that promote critical inquiry and synthesis of knowledge in universities and the education system. (10)

Revision of examination techniques, selection and admission procedures into universities to reflect students' academic potential instead of the government 's regional equity policy. (5)

Children should be allowed to enter formal schooling at an earlier age than the present age 7. (5)

Table 8.4
Respondents' Comments on Goal: Individual Personal Development
(12 Respondents)

Interpretations

Students are individuals with personal goals and aspirations that must be pursued in confidence and, in association with the needs of a society. (12)

As individuals, graduates must be fully educated to realize their potentials and to come to terms with themselves and life generally. (10)

Personal goals and aspirations must be pursued and realized in association with the society's goals. (9)
" Individuals must develop themselves and learn to understand their goals so that they can come to terms with other issues about life generally."

Confidence and sense of self-worth are important characteristics of individuals that are lacking in many Papua New Guineans. "Melanesians are non-competitive, they tend to be timid and withdrawn."

Problems

Self-confidence, self esteem, and self-worth are absent in many PNG university students due partly to their cultural and social norms. (11)
"In our traditional societies children are instructed to respect their elders. We are taught to listen attentively to their advice and learn to use and respect our environment. To question or interupt an elder is considered disrespectful and unruly."

Recommendations

University academic programs and facilities should be designed to accommodate individual personal needs. (12)

Academic programs should be flexible to accomodate students' personal and academic interests and encourage individuals to be inquisitive in their approaches to learning and knowledge acquisition . (8)

Physical facilities in universties must be improved to provide variety of services to meet students' social needs and guarantee students' privacy. (8)

"Universities should seriously consider providing family accommodations for senior and mature -age students."

Table 8,5
Respondents' Comments on Goal: Vocational Preparation
(14 Respondents)

Interpretations

Preparation of students for specific vocational, professional and technical careers. (8)

Universities were specifically established in PNG to prepare students to meet manpower demands of the country. (6)
" I believe (vocational preparation) is the fundamental reason for the establishment of this institution-- to train students in specific professional and semi-professional careers so that the country can have its own people in these areas."

The country's need for specialist technologists and other technical professionals is an important priority. (8)
" At this stage of PNG's development, it's the specialist technologists that are required by the country to develop its mining and engineering industries."

Problems

Statistical data on institutional manpower output are unreliable and limit the government's ability to accurately assess the nation's manpower needs. (4)

" The government's manpower assessment and projection are inaccurate. Experiences with the private sector and commerce convince us that their demands are greatly in excess to National Manpower 1, and National Manpower 2 (National Manpower Planning Documents) projections."

Inappropriate curriculum, examinations, selections and teaching methods in the education system limit the universities' abilities to prepare students for specific vocational careers. (5)

Limited student exposure to formal and technical education prior to admission to university forces universities to offer courses in basic technical and professional education and limits the time for specific vocational and technical programs at universities. (5)
Financial constraints limit the universities' capacity to diversify their vocational training programs. (6)

Recommendations

Primary, technical and university curricula should be revised to emphasize knowledge and skills related to specific vocational and technical careers. (5)

Technical subjects should be introduced to students in primary schools to familiarize them with technical concepts and knowledge prior to university. (5)

University curricula should emphasize industrial experiences as a major component of academic programs. (4)

Communication between interested parties should be improved to facilitate better understanding of the universities' role in preparing students for specific careers. (5)

Table 8.6
Respondents' Comments on Goal: Public Service
(12 Respondents)

Interpretations

Universities are endowed with highly qualified and experienced professional personnel and should use them to benefit the public. (8)

Universities should provide service to the public by conducting research into the nation's social, economic and environmental issues. (8)

Universities should serve the public by advising the government on research, policy formation, and implementation of social, economic and environmental programs. (8)

Problems

University research and advice on social and economic issues are under-utilized by the government and the public. (6)

Elitist attitudes of staff and students in universities undermine government and public trust in these institutions. (5)

"Some people in the university consider themselves as elites of the country and do not want to get their hands dirty helping the people. They don't want to deal with middle level bureaucrats in government departments. They tend to feel that they are here as staff to teach Chemistry, Physics etc., and any spare time they have should be spent in doing their research."

Lack of financial resources in the universities inhibit staff to render effective service to the public. (3)

Recommendations

University and government policies on public service should be reviewed to promote cooperative participation in research, policy formation and implementation. (5)

The universities should provide services to the government through research and consultation on policies and issues afffecting the state. (4)

Universities should remove policies which inhibit staff from undertaking nationally funded research, consultancies, and public service duties. (1)

Universities should improve communication with the government and the public so that staff and students will understand the needs and social conditions of the people. (6)

Government should eliminate financial sanctions on universities and utilize university resources to assist in policy development issues and problems. (3)

Table 8.7

Respondents Comments on Goal: Research
(11 Respondents)

Interpretations

Research is an academic and intellectual tool for generating knowledge. (6)
" Research. . . contributes to extending [staff's and students'] general knowledge and provides relevant and appropriate solutions to real life problems. Further, it is important for all aspects of policy development and implementation in PNG."

It enables clients to master inquisitive analytical and generalization skills necessary for data analysis and generation of new knowledge. (3)

Research generates insights that are helpful in alternative development and implementation of policies. (4)

Problems

Lack of understanding of the universities' role in research. (8)

Teaching and administrative duties limit staff capacities to conduct research. (5)
" Emphasis on increasing student numbers and student contact hours. . . makes it extremely difficult for staff to conduct substantial research. Further, due to lack of skilled administrative and technical staff, academics spend time tending to menial administrative duties."

Limited funds restrict research activities in the universties. (4)

Bureaucratic policies limit access to research funding from government and international funding agencies. (4)
"Procedures to obtain research funds from the government are long and cumbersome. Sometimes it takes up to two years to obtain any response from the government."

Recommendations

Communications should be improved between government , the universities and the public to increase understanding of the universities' research role. (8)

Staff duties should be revised to emphasize research. (4)

Research schools and courses should be established and emphasized in universities. (3)
"We must now plan for research schools and emphasize courses in basic and advanced research techniques."

The government should eliminate bureaucratic policies for obtaining university research funds. (3)
"The government should review policies on university access to external funds for research and improve procedures for obtaining such funds."

Table 8.8
Respondents' Comments on Goal: Community
(7 Respondents)

Interpretations

Creation of an institutional climate which promotes respect and concern for the welfare of others; a climate that is conducive to learning and intellectual excellence. (7)
"The climate on the campus i.e. morale; relationships between staff and students; and the way the place runs, are crucial to the general institutional welfare. There has to be a good relationship between staff and students. Education generally won't work unless that relationship exists."

Problems

Lack of concern by university staff and students for others. (4)
"There exists a distant relationship between staff and students here. Students are very nervous, very diffident about these relationships. This is compounded by the idea of 'foreigner versus local.' Students are scared about stepping into staff houses and staff are nervous about inviting students into their houses."

Dual-conditions of employment for staff with equal qualifications create division within the university community. (3)
" There exists a tendency for staff to be divided against each other and students divide into groups with their own interests rather than coming together as a single community."

Recommendations

Social and extra- curicula activities based on professional and academic interests of staff and students should be encouraged by university administrators. (5)
"Staff and students should conduct cooperative research projects in villages; participation in institutional sports activities are ways to bring staff and students together. These activities would create a feeling of 'oneness,' of 'belonging' to the community."

Improve communication and awareness between staff and students about the value of their institutional community. (5)

Table 8.9
Respondents' Comments on Goal: Advanced Training
(7 Respondents)

Interpretation

Facilitates indepth knowledge and provides opportunities and skills in particular subjects and disciplines. (3)

"We must make arrangements on this campus for post graduate training... including research training, and make arragements for external examiners to be on supervisory committees."

Rapid and vital changes in technology and national development emphasize the need for advanced training. (5)

Problems

Lack of opportunities and facilities in the universities and the country inhibit advanced training. (9)
"Facilities for training our people at the advanced level have not been taken into account at the government and planning level. At the moment we don't have a graduate school in our university. "

Clients' misunderstanding of the need for advanced training. (5)
" Some people do not see the need for further and advanced training. They think that once you have your first degree or diploma and have a job, that's it! You don't need to do any more study."

Lack of financial resources to support advanced training programs. (4)
"No financial scheme is available in PNG to finance post graduate programs and no one is prepared to create local awards for advanced studies and training."

Recommendations

Universities should establish post graduate departments, institutes and professional schools. (7)

The government should provide funding for advanced training programs in the country. (3)

Universities should improve communication with the public to increase awareness about the need for advanced training. (4)

Table 8.10
Respondents' Comments on Goal: Social Criticism/ Activism
(5 Respondents)

Interpretations

General awareness and assessment of social issues and values, with a view to promoting changes in contemporary society. (8)

"Papua New Guineans should reflect upon their past and should have clear visions of their future. They can only do this by understanding their past and contemporary events that are going on around them."

" It is the responsibility of educated people anywhere to be constructively critical about what is going on in their society, which includes being critical of the government and the society."

"We are going through a number of critical changes in this country. A developing country suffers from all sorts of social disorientations, corruptions and so on. Someone has got to be there, as a watch-dog if you like. We must train our students to be involved with these issues and to make them aware that they are the ones who are going to be involved in bringing changes in our social institutions."

Problems

Pressure from political leaders and selfish orientations of students have partially silenced staff and students from speaking out on pertinent social issues. (7)

"More recently university students have become more inward-looking than outward-looking. They are more concerned about scholarships and student spending allowances instead of the broader social issues."

Recommendations

Universities should continue to draw students' attention to their responsibility as social critics of their society. (4)

Interpretations

While addressing separate goals, Tables 8.2 to 8.10, display some overlap in the interpretations offered. Interpretations tend to focus on intellectual, academic, personal or technical aspects, suggesting that such aspects are uppermost in the minds of respondents as they contemplate university goals,

Problems

Goal-related problems expressed in tables 8.2 to 8.10 also reveal common themes. While relating to specific goals, respondents frequently cited broader issues as causes of problems. For example problems relating to academic and intellectual orientations of university students often originated from curriculum deficiencies in the education system, diverse cultural backgrounds of students or financial constraints imposed by the government on universities.

Recommendations

On the same note, suggested recommendations addressed issues within and outside the universities implying that solutions to goal-related problems in PNG universities have both internal and external loci. For example, public understanding of universities' roles in research is dependent on the institutions' research contribution to social issues and generous public funding of research activities. Limited educational experiences of university students must be addressed by the Department of Education and the universities.

Goal Integration

The above observations suggest that there are common elements within discrete goals. This possibility is explored in Table 8.11 which attempts to integrate comments made in the preceding tables.

Table 8.11

Common Interpretations, Problems and Recommendations related to IGI Goals

Interpretations

(a) Development of academic, intellectual, personal and technical skills
- Research skills
- Critical and analytical skills
- Data processing and application skills
- Needs assessment and goal setting skills.

(b) Academic, intellectual, personal and technical skills are significant for personal, social and national development.

Problems

(a) Diverse social, cultural, economic and educational experiences of clients
- Papua New Guinean social, cultural and economic values conflict with academic values
- Limited educational experiences of students constrain the scope of university instruction.

(b) Financial constraints on universities
- Inadequate funding for universities
- Bureaucratic funding policies and procedures for securing funds.

(c) Lack of communication and misunderstanding of the roles of universities
- Government misunderstanding
- Public misunderstanding.

(d) Structural and academic deficiencies in the Education system
- Late entry age into formal education (age seven)
- Low academic requirements (assessment, admission, selections)
- Inadequate curriculum content.

Recommendations

(a) Revision and improvement in organizational structures in universities and the education system
- System (early age entry to formal education)
- Academic (assessment, admission, curriculum)
- Financial (policies and procedures)
- Social and cultural (social and cultural research and education)
- Information and public relations (media, reports, seminars).

A study of Table 8.11 suggests that respondents generally emphasized IGI goals which promoted academic, intellectual, professional and personal skills. Furthermore, the data suggest a series of interdependent skills, the sum of which would enable a person to function as a well balanced and broadly educated member of society.

Four problems were repeatedly cited as challenges to universities. The first is dissonance between cultural and academic values. For example one respondent suggested that there were few outstanding academic staff in PNG universities whose personal, academic and cultural lifestyles would serve as models for students. He argued that much of what is observed in most university campuses appears contrary to dominant cultural practices in PNG.

The second problem is finance. Respondents argue that without improved financial support from government, PNG universities can do little to advanced their goals. Complex financial procedures and policies instituted by the government, particularly those for obtaining direct international funding to universities also add to the problem.

The third problem is communications. Respondents suggest that elitist attitudes of certain university staff and students minimizes opportunities for open communication with the public and undermines government and public trusts in the institutions. One respondent explains, "some people in the university consider themselves as elites of the country and do not want to get their hands dirty helping the people and don't want to deal with middle level bureaucrats in government departments."

Finally certain educational policies and structures were preventing the institutions and the system from optimizing goal achievement. Respondents cited late admission into the formal education system, poor assessment instruments, low academic requirements for admission into universities and inadequate curricula in schools and universities, as examples.

Revision and improvement in social attitudes, cultural practices, organizational policies and structures were common recommendations offered to assist universities achieve their goals. Among the suggested activities were (1) revision of the department's policy on age entry to the formal education system, (2) revision of assessment, selection and admission procedures to provincial high schools and universities-- to emphasize academic excellence rather than provincial and regional quota systems, (3) revision of government and universities' financial policies to provide effective access to funding sources, (4) a re-evaluation and orientation of cultural and social values to the modern needs of Papua New Guineans through research and public involvement of university students in rural development projects, and (5) effective communication between the universities and the public.

In sum, the data in Table 8.11 suggests that university goals represent a system of interrelated goals and that the success of one is dependent on the other. Similarly, associated problems and recommendations are interrelated and are dependent on commensurate action by university clients, individuals in the society, policy makers and authorities in the government and the universities. In other words the data seem to support the thesis by Gross and Grambsch (1974) that process goals are just as important as outcome goals and that an organization's success in achieving its goals requires a balanced emphasis on both the process and outcome goals. Further, such success is also dependent on cooperative elements-- education system, the government, the social, cultural and economic practices--in the larger environment.

Summary

This chapter presented respondents' goal interpretations, suggested problems and recommendations obtained through the interviews.

Several conclusions are evident from the findings:

The two methods -- questionnaire and interviews -- elicited some similarities in goals identified as important. (1) Interviewees share similar goal perceptions with IGI survey respondents. (2) Both groups would agree that the significance of IGI goals for universities in PNG is related to their impact on academic, intellectual, and personal skills.

(3) Differences in perceptions exist between survey respondents and interviewees relating to the significance of cultural factors for instructional strategies.

Ways of enhancing goal achievement include widening of students' formal education experiences-- including lowering the age of entry into community schools, revision of admission procedures into secondary and university education, emphasizing academic excellence, increasing financial support levels, and reducing bureaucratic barriers to resources.

CHAPTER 9

SUMMARY, DISCUSSION, RECOMMENDATIONS AND CONCLUSION

The study's summary, findings, recommendations and conclusion are presented in this chapter.

Summary

The universities of PNG were established in the 1960s to educate and prepare the people to assume administrative and technical functions of government previously performed by Australian personnel. With ambitious programs of teaching, research and technical training, the universities helped PNG to successfully achieve independence in 1975.

The achievement of independence, deteriorating economic conditions and the universities' quest for autonomy and intellectual freedom created uncertainties and conflicts among indigenous leaders and the public about the goals of universities in the country. Views of PNG's two prominent political leaders are exemplary of this conflict. Somare (1976), the country's first Prime Minister, favoured a pragmatic approach to university education and cited education of high-level personnel, research into national problems and issues, and universities acting as social-conscience of the nation by being critics of its government, as primary functions of PNG universities. Momis (1976), however, questioned this view and debated that the universities' proper role is to equip people with an intellectual attitude toward education as a lifelong activity that would help broaden their future horizons. Momis (1976) concluded that "the people of Papua New Guinea expect the university to give them a vision of the future" (p. 189).

Others (Tololo, 1976) believe that universities should continue to educate an elite group for national leadership and other professional functions of government, but opponents (Addison, 1981) argued that this would weaken the social and cultural fabric of PNG's egalitarian society.

The need for a clarification of the roles of university institutions was evident following independence, but no formal study of university goals in PNG has been made till now. This need is more acute due to current political, social and economic conditions in the country. Politically, the introduction of a decentralized system of government after independence has created additional demands for highly educated leaders and bureaucrats. Socially, through formal education, PNG traditions are being compromised by western values and lifestyles. For example, traditional kinship ties are being compromised by competitive and individualistic attitudes. Economically, diminishing Australian financial aid and low export prices are forcing the government to cut expenditures on basic services such as health and education. These conditions intensify questions about the roles and relevance of education, particularly university education.

Purposes and Procedures

The purpose of this study was to examine university goals from three perspectives -- official documentation produced from the time of nationalization to the present; ratings of present and preferred goals using an IGI type survey; and focussed interviews.

The following research questions based on a study of literature and of the contemporary PNG context, were articulated to direct the study.

1. What are the goals of PNG universities as described in the literature?
2. What are the perceived goals (actual and preferred) of the PNG university system?
3. What are the perceived goals of each university?

4. What are the differences (if any) between goal perceptions of administrators and academics?

5. What are the differences (if any) between goal perceptions of UPNG and PNGUT respondents?

6. What problems inhibit goal achievement?

7. What strategies might advance these goals?

Goals for PNG Universities

The findings of the study are reported in the sequence of the above stated questions, dealing with the documentary and perceived goals of the PNG university system first, then focusing on goal perceptions of respondents in the two universities. The differences between administrators and academics and UPNG and PNGUT respondents are described. Finally, strategies to enhance university goals, and problems inhibiting goal achievements are discussed.

Documentary goals. The documentation on goals was of two varieties--documents which referred specifically to goals, and documents from which goals could be inferred. In all, 18 primary documents were subjected to content analysis. The documents referred to a large number of possible goals including virtually all the goals described in the IGI. However, most emphasis was placed on the need to: (1) educate and train Papua New Guineans to meet the technical and administrative requirements of the nation; (2) assist students acquire general knowledge for scholarly studies; and (3) maintain intellectual standards in the system; (4) develop skills and attitudes for life long learning, including research and problem-solving strategies; (5) encourage Papua New Guineans to be responsible critics of their society by providing objective criticisms of prevalent values and offering constructive changes to existing institutions; (6) enhance PNG's egalitarian society through the provision of university education to disadvantaged groups -- particularly women and members of the public in rural and remote communities; (7) establish an university environment that will promote intellectual pursuits, encourage openness, individual freedom, and mutual trust and respect among members of the university community, and tolerate and appreciate Papua New Guinea's diverse cultures and social practices; and (8) effectively utilize resources to realize national and individual goals.

Perceived goals. Perceived goals were derived by questionnaire and by interviews. Two kinds of goals were studied--IGI goals and goals specific to PNG. Perceptions elicited were of "actual" and "preferred" goals.

The top ten IGI goals for the PNG university system were as follows:

Actual Goals : (1) Academic development; (2) community; (3) accountability/efficiency; (4) advanced training; (5) democratic governance; (6) intellectual orientation; (7) vocational preparation; (8.5) freedom and research; and (10) intellectual aesthetic environment. The average rating for these goals was 3.0 on a 5-point scale.

Preferred Goals: (1) Intellectual orientation; (2) community; (3) academic development; (4) intellectual aesthetic environment; (5) public service; (6) accountability/efficiency; (7.5) individual personal development and advanced training; (9) vocational preparation; and (10) research. The average rating for these goals was 3.9.

The top five local specific goals were:

Actual Goals: (1) Training of national staff for universities in PNG; (2) cooperation with CHE in planning higher education in PNG; (3) promotion of language, mathematics and library skills for university students; (4) establishment of a single salary/working condition for university staff; and (5) revision of university priorities in cooperation with CUTM guidelines. The average actual rating for these goals was 3.4.

Preferred Goals: (1) Training of national staff for universities in PNG; (2) cooperation with CHE in planning higher education in PNG; (3) promotion of language, mathematics and library skills of university students; (4) encouragement of PNG women to obtain university education; and (5) establishment of a single salary/working condition for university staff. The average preferred rating for these goals was 4.2.

The top ten IGI goals for UPNG were as follows:

Actual Goals: (1) Academic development; (2) community; (3) accountability/efficiency; (4) freedom; (5) democratic governance; (6) intellectual orientation; (7) advanced training; (8) research; (9) vocational preparation, and (10) intellectual aesthetic environment. The average rating for these goals was 3.0.

Preferred Goals: (1) Intellectual orientation; (2) community; (3) academic development; (4) intellectual aesthetic environment; (5) public service; (6) research; (7) individual personal development; (8) accountability/efficiency; (9) advanced training; and (10) innovation. The average preferred rating for these goals was 3.9

The top five local specific goals for UPNG were:

Actual Goals: (1) Training of national staff for universities in PNG; (2) promotion of language, mathematics and library skills of university students; (3) cooperation with CHE in planning higher education in PNG; (4) provision of in-service education and training for teachers/instructors; and (5) establishment of a single salary/working condition for university staff. The average rating for these goals was 3.5.

Preferred Goals: (1) Training of national staff for universities in PNG; (2) establishment of a single scale salary and working condition for university staff; (3) cooperation with CHE in planning higher education for PNG; (4) encouragement of PNG women to obtain university education; and (5) promotion of language, mathematics and library skills of university students. The average rating for these goals was 4.2.

The top 10 IGI goals for PNGUT were as follows:

Actual Goals: (1) Community; (2) academic development; (3) accountability/efficiency; (4) advanced training; (5) vocational preparation; (6) intellectual orientation; (7) democratic governance; (8) meeting local needs; (9) intellectual aesthetic environment; and (10) research. The average rating for these goals was 3.0.

Preferred Goals: (1) Intellectual orientation; (2) community; (3) academic development; (4) vocational preparation; (5) accountability/efficiency; (6) intellectual aesthetic awareness; (7) advanced training; (8) individual personal development; (9) public service; and (10) innovation. The average rating for these goals was 3.8.

The top five local specific goals were:

Actual Goals: (1) Training of national staff for universities in PNG; (2) cooperation with CHE in planning higher education in PNG; (3) promotion of language, mathematics and library skills of university students; (4) encouragement of PNG women to obtain university education; and (5) revision of university priorities/ programs in cooperation with CUTM guidelines. The average rating for these goals was 3.5

Preferred Goals: (1) Training of national staff for universities in PNG; (2) cooperation with CHE in planning higher education in PNG; (3) adaptation and modification of teaching methods to Papua New Guinean learning styles; (4) promotion of language, mathematics and library skills of university students; and (5) encouragement of PNG women to obtain university education. The average rating for these goals was 4.2.

Goal comparisons. Goal comparisons are revealed by the above information. There is a consistent difference between actual and preferred ratings with the latter exceeding the former by about .8 points on a 5-point scale. Statistically significant differences were found in virtually all paired comparisons of the 20 IGI and 10 local specific goals. The inference from this finding is that respondents perceive that there should be renewed emphasis on current goals in the system.

There is a clear trend for administrators to rate goals (both actual and preferred) higher than did academics. Administrators rated the following actual and preferred goals of higher importance than did academics: academic development; traditional religiousness; advanced training; public service; community; intellectual aesthetic environment; off-campus learning; accountability/ efficiency; and innovation. On the other hand, academics' preferred ratings for intellectual orientation and freedom were significantly higher than the ratings of administrators.

Administrators' actual and preferred ratings of local specific goals were higher than those of academics.

The differences reported above for the whole PNG system were found in each of the two universities. However, when comparisons were made between goal perceptions for the two universities several differences were found, some reflecting planned foci of each. For example, UPNG respondents' had higher actual and preferred ratings for social criticism/activism, freedom and provision of in-service education for teachers and instructors than did PNGUT respondents. These differences reflect UPNG's focus on liberal arts and teacher education programs. Similarly, PNGUT respondents' higher ratings of vocational preparation, meeting local needs and public service are reflections of that institution's planned technical and practical orientations.

Other differences showed that UPNG respondents rated more of the preferred goals of higher importance than did PNGUT respondents. UPNG respondents rated eight out of ten preferred IGI, and all four local specific goal-differences of higher importance than did PNGUT respondents. The data suggests that UPNG respondents may be more futuristic in their goal perspectives than PNGUT respondents. Alternatively, PNGUT respondents may be preoccupied with the tasks at hand and are less concerned about the long term implications of the goals. PNGUT respondents' higher actual ratings of adaptation and modification of teaching methods to Papua New Guinean learning styles, development of joint-university programs, and encouragement of PNG women to obtain university education seem to support this case.

Goal Inhibitors

Interviewees elaborated on goals which they selected as among the most important, especially stressing problems inhibiting their implementation. The most important problems facing universities in PNG are: (1) dissonance between cultural and academic values; (2) inadequate finance; (3) lack of communication; and (4) structural deficiencies in the system. Established cultural values and traditions of Papua New Guineans present challenges to the rational /scientific-based university education. Inadequate financing of universities limits their capacities to improve academic programs, conduct research and be of service to the public. Lack of communication between the public and the universities leads to distrust and misunderstanding among the parties. Finally structural deficiencies in the education system, especially those relating to policies on age of entry to community schools, and admission to secondary and university education, work against the achievement of university goals.

Strategies to Promote Goals

Interviewees' most prominent suggestions for enhancing goal achievement are counterparts to the problems identified above. They include: (1) re-evaluating traditional assumptions about PNG's culture and finding ways to harmonize modern PNG values with the goals of higher education; (2) increasing financial support levels and reducing bureaucratic barriers to resources; (3) establishing institutional mechanisms to educate the public about the universities; and (4) revising admission policies to primary, secondary and university education.

Discussion

Some of the findings of this study are expected, others are unanticipated. It was reassuring to note the consistency of information on goals brought to light by the triangulation process, bringing credence to the data. Triangulation is a recognized research technique and, though time consuming, has much to commend it. The salience of IGI goals as reflective of university practice is confirmed. This instrument continues to serve a valuable purpose, and the goal statements are easily adaptable to a local culture. The addition of local specific goals was productive in focusing on specific issues which are of particular significance for future policies on university development in PNG.

Five of these issues are worthy of further discussion: dissonance between socio-cultural and academic values; financing of university education; structural factors influencing universities; concern over dual -salary and employment conditions for university employees; and relationships between the two universities.

Values

One of the few differences evident among data from the documents, questionnaire and interview relates to perceptions about the psychological impact of cultural values on students' learning behavior. National writers and university founders (Kilage, 1976; Momis, 1976; Somare, 1976; Currie et al.1964; Olela, 1980; Tulaha-Martin, 1988) perceive universities as instruments to promote Papua New Guinean values and "Melanesian world view," and argue that the successes of PNG universities are dependent on the achievement of this goal. However, questionnaire data indicate that administrators and academics place traditional university goals above goals which promote an understanding of indigenous cultures and values. For example, "cultural aesthetic awareness" and "promotion and understanding of PNG's cultural practices" were among the lowest rated goals. These suggest that PNG universities may have overlooked one of their basic foundation goals -- to research into and understand the cultural traditions of the people of PNG (Currie et al. 1964, Somare, 1976) -- and, in so doing, may be alienating themselves from that society.

While acknowledging that Papua New Guinean social and cultural values are important attributes for human development, interviewees reported that they represent major challenges to university education and suggest that universities explore ways to harmonize traditional values with the nation's modern needs.

In a study of "Community Participation in Community Schools in PNG," Tulaha-Martin (1988) suggested that, given the different philosophical bases of meaning-making between the school and the indigenous communities, attempts to motivate and involve client participation in the system must necessarily reflect indigenous values, structures and learning framework. Universities in PNG should attempt to integrate valuable elements from their cultural settings if they are to be effective instruments of public policy. It appears that attempts should be made to shape the forms and structures of institutions to the experiences of PNG students.

On the other hand, current emphasis on conventional goals of universities may reflect a new and growing culture in PNG. It can be argued that PNG universities were founded as instruments of social change -- to prepare Papua New Guineans for full participation in a modern post-industrial culture. If this view is accepted, then the universities are justified in modelling themselves on western archetypes.

Finance

PNG, like other nations, is suffering from a financial crisis, especially regarding the funding of public institutions. The situation may be even more desperate here than in other places due to the nation's narrow economic base and a recent closure of one its major revenue sources -- the Bougainville copper mine. While it is easy to suggest that additional funding would do much to ameliorate university problems, given the present economic conditions, the likelihood of this happening is minimal. Universities in PNG must contend with the current funding level and seek alternative means to ride out the crisis. Re-adjustment of salary and employment conditions and rationalization of programs to reflect the nation's economic conditions and manpower needs are hard but desirable alternatives.

Structural Factors

Other means to advance university goals include the abolition of community school quotas as a criterion for selection into secondary and higher education. Continuation of this practice may be politically sound but it contributes to high attrition, inefficiency, and academic mediocrity in the country's university system. Increased emphasis on academic performance as a primary instrument for selection and admission to secondary and university education would be a significant step toward the achievement of intellectual goals in PNG's universities. Concurrent with these measures, improved communication with the public is an imperative. The universities must jointly establish means through which the purposes and activities of the universities are better understood leading to enhanced public trust.

National /Expatriate Discrepancy

The high ratings of establishment of a single salary-scale and employment conditions for university staff suggests that respondents are concerned about existing distinction in monetary and employment conditions between PNG citizens and others. This practice, if continued, may lead to future labour unrest in PNG universities. Furthermore, it may cause an exodus of qualified PNG staff from the universities to more lucrative positions in the private sector. Consequently, the universities would remain dependent on international staff. This situation may be satisfactory from an academic perspective but it inhibits the foundational goal of national independence. It may be necessary to replace existing dual-employment conditions with one that promotes and recognizes academic pursuits, scholarly achievements and commitment to institutional and national welfare, regardless of citizenship. More importantly, university employment conditions must reflect the nation's prevailing economic conditions.

National University

The findings from this study and from general observations indicate that the two institutions have more common characteristics than differences. Assigned goal rankings of both institutions were similar suggesting that both institutions favor traditional university goals to culture specific ones. Both universities admit students with similar academic standards and offer preliminary academic and study skills programs aimed at assisting students in meeting the challenges of degree studies. Current enrollments in both universities are relatively small. Academic and administrative structures are similar. These characteristics and other findings such as high preferred ratings of accountability/efficiency call for improved institutional cooperation and program coordination between the universities.

Some interviewees supported a return to the Currie Commission recommendation for a single national university that would provide a balanced liberal education as well as specific technical and professional education based on national manpower needs. Given the current economic conditions in PNG, low enrollments (less than 4,000 students), and other common characteristics expressed above, serious consideration should be given to rationalization of university programs with the ultimate view of uniting the two universities to form a national university. Specific technical and professional needs of the country could be effectively met by creating, from time to time, specialist faculties, institutes or programs within a national university. Upon achieving their specific mandates, such faculties and programs could be terminated and resources re-directed. The current university system promotes duplication of resources by serving institutional rather than national needs. Unification of the two institutions into a national university would enhance university efficiency and effectiveness.

Recommendations

Several implications for theory, research and practice arise from this study.

Theory

This study confirms observations by Gross and Grambsch (1974), Hall (1977), Thompson and McEwen (1958), and Yauchtman and Seashore (1967), that complex social, political, educational and cultural experiences of individuals, groups and organizations have significant and often conflicting influences on university goals and must be accounted for in organizational goal-setting and effectiveness. Organizations attempting to establish their niche in a complex and turbulent environment must consider many environmental factors at local and cosmopolitan levels in determining and setting goals. Also the environment is dynamic (changing), therefore goals have to be reassessed from time to time. This may be encouraged by a variety of techniques such as national and international conferences, quinquennial audits, and periodic review of institutional mandates.

Research

This report has opened avenues for further research. The importance of students' perceptions and influence on the evolution of British, European and American universities is widely reported in the literature (Ashby, 1970, 1974; Carnegie Commission of Higher Education, 1973; Perkins, 1973). Likewise in PNG, students' views and actions have influenced universities' decision making and constitutional structures in the late seventies and early eighties (White, Lapiso, and Diro, 1979). This report, however, did not consider students' goal perceptions. Future research on goal perceptions of students in PNG universities would provide an interesting and informative comparison.

Further research is required to explore the socio-cultural -psychological orientations of PNG high school and university students and how these affect their prospects for university success.

The stability of goals is unknown. Will the current goal perceptions remain over time? Future research on the same groups may: establish goal dominance of one group over another; determine possible power bases; or reveal degrees of influence certain groups have on university policies and developments in PNG.

Practice

The results of this study indicate that:

(1) PNG universities are receptive to recommendations from CHE for changes in university education; CHE should continue to discuss cooperative strategies between the institutions to achieve efficiency in the higher education system. Particular consideration should be given to possible rationalization of university programs with the ultimate view of uniting existing universities into a national university of PNG.

(2) At present PNGUT appears to be more inclined to support joint-university initiatives than is UPNG; PNGUT should be encouraged to initiate joint academic endeavors with UPNG. Development of a comprehensive transfer of credit program between the institutions would be a promising move. Such a step may eventually lead to joint-university programs and, ultimately, lead to the formation of a national university of PNG.

(3) UPNG and PNGUT academic and administrative staff are likely to be receptive of measures designed to enhance national staff development and training, cooperative planning of higher education and promotion of language, mathematics and library skills for university students. These are promising initial goals for joint actions by the institutions.

(4) The high rating of establishment of a single salary scale and employment conditions for citizen and non-citizen staff in PNG universities suggest that a high percentage of respondents are concerned about the existing distinction in salary scales and working conditions between citizens and non-citizens in PNG universities. Improved staff morale and institutional goal achievement in universities would be better served if university authorities, the government and the staff associations reached an early settlement to this issue. Immediate discussion towards a negotiated settlement would be an appropriate step toward this end.

(5) A public relations effort is required to better inform clients and the public about the roles of universities in national development. Establishment of a joint UPNG and

PNGUT public relations committee would advance public understanding of the institutions and contribute significantly toward a more amicable and trusting relationships between the universities and their clients.

General Conclusion

The findings of this study indicate that traditional and local specific goals of universities in PNG are interrelated and appropriate. However, in pursuing these goals the two universities may have emphasized traditional goals and neglected the others. Currently they continue to serve the traditional functions of teaching, research, and democratic community. However, to be fully appreciated and understood by the public, universities must take up the challenge of providing more public service through research into government policies, cultural and social practices. As it develops, the country requires greater understanding of its traditional, social, economic, political and natural environments as a backdrop to its future. The universities are among the few institutions to meet this challenge. The welfare of a nation and its universities are inextricably linked. This study may have helped to demonstrate this truism in the case of PNG.

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APPENDIX A

INSTITUTIONAL GOALS INVENTORY (IGI) ADAPTED FOR USE IN PAPUA NEW GUINEA

WITH PERMISSION OF EDUCATIONAL TESTING SERVICE.
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To the respondent:

Many educational, social, and economic circumstances have taken place that have made it necessary for the colleges and universities in Papua New Guinea to reach clear and often new understanding about their goals. During the late 1960s there were demands placed on our colleges and universities to serve certain goals and national interests. Now in the 1980s, a widespread financial crisis is making it necessary for colleges and universities to re-examine their objectives and establish their priorities to which limited resources may be directed.

The Institutional Goals Inventory (IGI) was developed as a tool to help higher education institutions to delineate goals and establish priorities among them. This instrument does not tell colleges what to do in order to reach the goals. Instead it provides a way by which many individuals, and constituent groups can contribute their ideas about desired institutional goals. Summaries of the results of these ideas can provide a basis for reasoned discussion towards final definitions of colleges and university goals.

The **Inventory** was designed to embrace possible goals of all types of higher education institutions-universities, church-related colleges, junior colleges and other institutions. Most of the goal statements in the **Inventory** may be thought of as "output " or "outcome" goals-substantive objectives colleges may seek to achieve (e.g. qualities of graduating students, research emphasis, kinds of public services). Statements towards the end of the instruments relate to "process" goals-goals having to do with campus climate and the educational process.
The IGI is intended to be completely confidential. Results will be summarized only for groups- i.e. members of faculty, administrators, members of the Governing Councils, students and so on. In no instance will responses of individuals be reported. The **Inventory** should ordinarily not take longer then 45 minutes to complete.

This research and the attached questionnaires have been reviewed by, and have the support of the Vice Chancellor for distribution to academic staff and administrators in this university. Your cooperation is required to respond to all the items in this questionnaire within the next seven days. When you have done so, please return the questionnaire to me, C/ The Staff Development Officer, University of Papua New Guinea, P.O. Box 320, University Post Office, Waigani. Thank you for your much needed support.

Yours Sincerely,
John Mark Solon.

DIRECTIONS

The inventory consists of 100 statements of possible institutional goals. Using the answer key shown in the examples below, you are asked to respond to each statement , by shading two of the boxes in two ways:

First-- How important is the goal at your university at the present time?

Then-- In your judgment, how important should the goal be at your university?

Examples

1. of no importance, or not applicable
2. of low importance
3. of medium importance
4. of high importance
5. of extremely high importance

A. to require a common core of learning experiences for for all students...						
	is	1	2	3	4	▨
	should be	1	2	3	▨	5

In this example, the respondent believes the goal "to require a common core of learning experiences for all students" is presently of extremely high importance, but thinks that it should be of high importance.

B. to give alumni a larger and more direct role in the work of the institution						
	is	1	▨	3	4	5
	should be	1	2	3	▨	5

In this example, the respondent sees the goal "to give alumni a larger and more direct role in the work of the institution" as presently of low importance, but thinks that it should be of high importance.

Consider the institution as a whole in making your judgements. In giving the SHOULD BE response, do not be restrained by your beliefs about whether the goal, realistically, can ever be attained on the campus.

Please respond to every goal statement in the questionnaire by blackening one box after after IS and one box after SHOULD BE as shown in the above examples. It is recommended that you use any soft lead pencil throughout the questionnaire. Mark each answer so that it completely blackens (fills) the intended box.

Information questions (101-105): These questions are included to enable the researcher the the groups of respondents and the universities in which they work. Please respond to them by shading shading the box which best describes your (1) position/ level, (2) age group, (3) nationality and discipline orientation and (4) the university in which you work or are a member of its governing council.

Please respond to these goal statements by blackening one box after "Is" and one box after"should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

1. to help students acquire depth of knowledge in at least one academic discipline...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
2. to teach students methods of scholarly inquiry, scientific research, and/or problem definition or solution...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
3. to help students identify their own personal goals and develop means of achieving them...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
4. to ensure that students acquire a basic knowledge in the humanities, social sciences, and natural sciences...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
5. to increase the desire and ability of students to undertake self directed learning...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
6. to prepare students for advanced academic work, e.g. at a university, graduate or professional school...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
7. to develop students' ability to synthesize knowledge from a variety of sources...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
8. to help students develop a sense of self-worth, self-confidence and a capacity to have an impact on others...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
9. to hold students throughout the institution to high standards of intellectual performance...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "Is" and one box after "should be"

1. Of no Importance, or not Applicable
2. Of low Importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

10. to instill in students a life-long commitment to learning...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
11. to help students achieve a deeper level of self understanding...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
12. to ensure that students who graduate have achieved some level of reading, writing and mathematics competency...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
13. to help students be open, honest, and trusting in their relationship with others...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
14. to encourage students to become conscious of the important moral issues of our times...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
15. to increase students' sensitivity to and appreciation of various forms of art and artistic expression...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
16. to educate students in a particular religious heritage...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
17. to help students understand and respect people from diverse backgrounds and cultures...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
18. to require students to complete some coursework in the humanities or arts...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "is" and one box after "should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

19. to help students become aware of potentialities of a full-time religious vocation...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
20. to encourage students to become committed to working for world peace...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
21. to encourage students to express themselves artistically, e.g. in music, painting, woodcarving...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
22. to develop students' ability to understand and defend a theological position...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
23. to encourage students to make concerns about the welfare of all mankind a central part of their lives...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
24. to acquaint students with forms of artistic or literary expression in other countries besides Papua New Guinea...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
25. to help students develop a dedication to serving God in everyday life...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
26. to provide opportunities for students to prepare for specific occupational careers, e.g. accounting, teaching, engineering...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
27. to develop what would generally be regarded as a strong and comprehensive graduate school...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "is" and one box after"should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium Importance
4. Of High Importance
5.Of Extremely High Importance

28. to perform contract research for government, business and industry...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
29. to provide opportunities for continuing education for adults in the local area, e.g. on a part-time basis...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
30. to provide educational programs geared to new and emerging career fields...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
31. to prepare students in one or more of the traditional professions, e.g. law, medicine, architecture...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
32. to offer graduate programs in such 'newer' professions as engineering, education and social work...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
33. to serve as a cultural centre in the community served by the campus...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
34. to conduct basic research in the natural sciences...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
35. to conduct basic research in the social sciences...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
36. to provide retraining opportunities for people whose job-skills have become out of date...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "is" and one box after "should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

37. to contribute through research to the general advancement of knowledge...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
38. to assist students in deciding upon a vocational career...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
39. to provide skilled manpower for local area business, industry and government...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
40. to facilitate involvement of students in neighborhood and community-service activities...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
41. to conduct advanced study in specialized problem areas, e.g through research institutes, centres or graduate programs...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
42. to provide educational experiences relevant to the evolving interests of women in Papua New Guinea...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
43. to provide critical evaluation of prevailing practices and values in Papua New Guinea society...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
44. to help people in disadvantaged provinces acquire knowledge and skills they can use in improving their own communities...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
45. to move to, or maintain, a policy of essentially open admissions and then to develop meaningful educational experience for all who are admitted...	Is	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
	Should be	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Please respond to [illegible] statements by blackening one box after "is" and one box after "should be"

1. Of no Importance, or not Applicable
2. Of low Importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

46. to serve as a source of ideas and recommendations for changing social institutions judged to be unjust...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
47. to work with governmental agencies in designing new social and environmental programs...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
48. to offer developmental or remedial programs in basic study skills (reading, writing, mathematics)...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
49. to help students learn how to bring about change in Papua New Guinean Society...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
50. to focus resources of the institutions on solutions of major social and environmental problems...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
51. to be responsive to regional and national priorities when considering new educational programs for the university...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
52. to provide educational experiences relevant to the evolving interests of various provincial groups in Papua New Guinea...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
53. to engage as an institution in working for basic changes in Papua New Guinea society...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
54. to ensure that students are not prevented from hearing speakers presenting controversial points of view...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "is" and one box after"should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

55. to create a system of campus governance that is genuinely responsive to the concerns of all people at the institution...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
56. to maintain a climate in which faculty commitment to the goals and well-being of the institution is as strong as their commitment to professional careers...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
57. to ensure the freedom of students, professors/teachers to choose their own lifestyle (living arrangements, personal appearance)...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
58. to develop arrangements by which students, professors/teachers, administrators and Council members can be significantly involved in campus governance...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
59. to maintain a climate in which communication throughout the organizational structure is open and candid...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
60. to place no restrictions on off- campus political activities by professors/teachers or students...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
61. to decentralize decision making on the campus to the greatest extent possible...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
62 to maintain a campus climate in which differences of opinion can be aired openly and amicably...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
63. to protect the right of professors/teachers to present unpopular or controversial ideas in the classroom...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after [illegible] and one box after "should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium importance
4. Of High importance
5. Of Extremely High Importance

64. to assure individuals the opportunity to participate or be represented in making any decision that affects them...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
65. to maintain a climate of mutual trust and respect among students, professors/teachers, and administrators...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
66. to create a campus climate in which students spend much of their free time in intellectual and cultural activities...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
67. to build a climate on campus in which continuous educational innovation is accepted as an institutional way of life...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
68. to encourage students to spend time away from campus gaining academic credit for such activities as a year of study abroad, in work-study programs and student exchange schemes...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
69. to create a climate in which students and professors/teachers may easily come together for informal discussion of ideas and mutual interests...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
70. to experiment with different methods of evaluating and grading student performance...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
71. to maintain or work to achieve a large degree of institutional autonomy or independence in relation to other governmental or educational agencies...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
72. to participate in a network of universities through which students, according to plan, may study on several campuses during their undergraduate years...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "is" and one box after"should be"

1. Of no Importance, or not Applicable
2. Of low Importance
3. Of Medium Importance
4. Of High Importance
5.Of Extremely High Importance

73. to sponsor each year a rich program of cultural events--lectures, concerts, art exhibits, and the like...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
74. to experiment with new approaches to individualized instruction such as tutorial, flexible scheduling and students planning their own programs...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
75. to award the bachelor's and or equivalent degree for supervised study done away from the campus, e.g. by extension, correspondence or provincial study centres or through field work...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
76. to create an institution known widely as an intellectually stimulating and exciting place...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
77. to create procedures by which curricular or instructional innova[illegible]ns may be readily initiated...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
[illegible]. to award the bachelor's and/or equivalent degree to some individuals solely on the basis of their performance on an acceptable examination (with no university study on or off campus necessary)...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
79. to apply cost criteria in deciding among alternative academic and non-academic programs...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
80. to maintain or work to achieve a reputable standing for the institution within the academic world (or in relation to similar universities)...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
81. to regularly provide evidence that the institution is actually achieving its stated goals...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "Is" and one box after"should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium importance
4. Of High Importance
5. Of Extremely High Importance

82. to carry on a broad and vigorous program of extra curricular activities and events for students...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
83. to be concerned about the efficiency with which the university operations are conducted...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
84. to be organized for continuous short , medium and long range planning for the total institution...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
85. to include local citizens in planning university/college programs that will affect the local community...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
86. to excel in intercollegiate athletic competition...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
87. to be accountable to funding sources for the effectiveness of university programs...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
88. to create a climate in which systematic evaluation of university programs is accepted as an institutional way of life...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
89. to systematically interpret the nature , purpose,and work of the institution to citizens off the campus...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
90. to achieve consensus among people on the campus about the goals of the institution...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "Is" and one box after"should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium importance
4. Of High importance
5. Of Extremely High importance

91. to review priorities and programs in the university in line with the Committee for University Trained Manpower (CUTM) guidelines	Is	1	2	3	4	5
	Should be	1	2	3	4	5
92 . to adapt and modify teaching methods to the learning styles of Papua New Guineans	Is	1	2	3	4	5
	Should be	1	2	3	4	5
93. to cooperate with the Commission for Higher Education (CHE) in the planned development of higher education in Papua New Guinea...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
94. to provide in-service education and training programs for teachers and instructors in Papua New Guinea:..	Is	1	2	3	4	5
	Should be	1	2	3	4	5
95. to train national staff to replace expatriate staff in the university...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
96. to develop joint university programs with University of Papua New Guinea and Papua New Guinea University of Technology...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
97. to encourage Papua New Guinean women to obtain university education...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
98. to establish a single salary/working conditions policy for staff at the University of Papua New Guinea and Papua New Guinea University of Technology...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
99. to promote the traditional cultural practices of the many cultural groups in Papua New Guinea...	Is	1	2	3	4	5
	Should be	1	2	3	4	5

Please respond to these goal statements by blackening one box after "Is" and one box after"should be"

1. Of no importance, or not Applicable
2. Of low importance
3. Of Medium Importance
4. Of High Importance
5. Of Extremely High Importance

100. to improve the language, mathematics and library skills of preliminary year students in the university...	Is	1	2	3	4	5
	Should be	1	2	3	4	5
Go on to the next page please	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5
	Is	1	2	3	4	5
	Should be	1	2	3	4	5

PERSONAL DATA

Respond to these questions by shading the box which best describes your situation.

101. You are responding to this questionnaire as

an academic staff member............ 1

a council member.................... 2

an administrator.......................... 3

102. You are a citizen of

Papua New Guinea...................... 1

Another country..(specify:______________) 2

103. Your age at the time of the survey is in the following age range...

20-30 years............................ 1

31-50 years.............................. 2

50+ years................................ 3

104. You are an academic staff, administrator or Council member of...

The University of Papua New Guinea... 1

The Papua New Guinea University of Technology.................................. 2

105. If you are an academic staff member please shade the most appropriate box which best describes the orientation of your discipline

Arts 1

Education.................................. 2

Engineering (Civil, Electrical, Mechanical) 3

Law.. 4

Medicine.................................. 5

Science 6

Other (specify______________________) 7

End of the Questionnaire. Thank you.

APPENDIX B

LIST OF INTERVIEWEES

Names, Status of Interviewees; Dates and Length of Interviews

Interviewee	Status	Date	Time
Mr. W. Bradley	Principal, Goroka Teachers' College; Member of UPNG Council	25th Sept. 1987	45 min.
Mr. K. Clapperton	Bursar, PNGUT	6th Oct. 1987	60 min.
Mr. F. Diala	Registrar and Member of UPNG Council	4th Sept. 1987	50 min.
Professor B. Enyi	Professor of Agriculture, PNGUT	2nd Oct. 1987	60 min.
Professor Gawne	Professor of Chemical Engineering, PNGUT	9th Oct. 1987	60 min.
Mr. T . Gee	Registrar, PNGUT; Member of PNGUT Council	5th Oct.1987	90 min.
Sir John Guise	Director, PNG Copra Marketing Board; Member of UPNG Council; (Formerly Member/Speaker of the House of Assembly; Parliament ; Governor General of PNG.	4th Sept. 1987	45 min.
Mr. R. Guy	Director, Distance Education Unit-Goroka Teachers College.	23rd Sept. 1987	60 min.
Professor Harris	Member of PNGUT Council; Professor of Electrical Engineering.	8th Oct. 1987	60 min.
Mr. P. Katu	Professional Engineer; Member of PNGUT Council	7th Oct. 1987	60 min.
Dr. I . Kevau	Associate Professor UPNG; Heart Specialist- Medical Faculty.	26th Oct. 1987	50 min.
Sir Buri Kidu	Chief Justice of PNG; Chancellor of UPNG and Chairperson UPNG Council.	12th Nov.1987	90 min.
Mr. N. Kuman	Deputy Vice Chancellor UPNG.	4th Sept. 1987	60 min.

Names and Status of Interviewees; Dates and Length of Interviews (cont.).

Interviewee	Status	Date	Time
Mr. H. Lapiso	Director, Goroka Coffee International; Member of PNGUT Council.	22nd Sept. 1987	80 min.
Professor J. Lynch	Professor of Language; Vice Chancellor, UPNG	3rd Sept. 1987	60 min.
Mr. Mannan	Planning Officer, UPNG.	7th Sept. 1987	90 min
Mr. M. Moramoro	Vice Chancellor, PNGUT.	9th Oct. 1987	60 min.
Mr. S. Motolova	Deputy Principal, Goroka Teachers' College; Member of UPNG Council.	22th Sept. 1987	60 min.
Dr. O. Nekitel	Senior Lecturer, Language Department-UPNG.	11th Sept. 1987	60 min.
Professor M. O'Collin	Professor, Social Works UPNG; Director, Staff Development Unit- UPNG.	3rd Nov. 1987	50 min.
Mr. G. Roakeina	Secretary, National Department of Education.	1st Sept. 1987	90 min.
Dr. S. Saulei	Senior Lecturer, Biology Department- UPNG	15th Sept.1987	80 min.
Mr. J. Semos	Lecturer , Goroka Teachers' College; Member UPNG Council.	24th Sept. 1987	60 min.
Ms. M. Siaguru	Chairperson, Commision for Higher Education; Member of UPNG Council.	30th Oct. 1987	80 min.

Names, Status of Interviewees; Dates and Length of Interviews

Interviewee	Status	Date	Time
Mr. P.Songo	Commissioner Designate to Canberra; Member of PNGUT Council; (Formerly Chairperson, Public Services Commission; Secretary, National Department of Education).	2nd Nov. 1987	90 min.
Mr. T. Taufa	Dean, Medical Faculty- UPNG	2nd Sept. 1987	50 min.
Mr. L. Torres	Deputy Vice Chancellor and Member of Council, PNGUT.	2nd Oct. 1987	60 min.
Professor J. Waiko.	Professor of History and Member of Council, UPNG	28th Oct. 1987	90 min.

APPENDIX C

INSTITUTIONAL GOALS INVENTORY CONSTRUCT VALIDITY PROCEDURES

CONSTRUCT VALIDITY PROCEDURES USED TO DETERMINE THE VALIDITY OF INSTITUTIONAL GOALS INVENTORY INSTRUMENT.

Two of the questions asked when constructing the IGI were:

1. To what extent do the goals areas defined in the IGI, actually measure what they are intended to measure in terms of both present and preferred importance?
2. To what extent do the goal areas have the same meaning to an institution's different constituent groups?

In order to answer the above questions the following construct validity procedures were used to guide the analysis of the data to support intuitive expectations.

1. Institutional data were correlated with the present importance ratings of the goals areas. When the correlation of a given goal area (both positive or negative) corresponded to an expected pattern, the validity of the goal area is supported. However, if the expected goal area is not found, goal area validity is not supported.
2. A group of higher education specialists familiar with the California system selected the type of institution that gave the most and least importance to each goal area. These judgements by experts were compared with means ratings of present importance of each goal area provided by faculty, student, administrators and community groups at each type of institution. If there were agreement between the specialists and each constituent group, it provided additional support for the validity of the goal area.
3. The institutional types receiving ratings of greatest and least importance for each goal area were identified by constituent group. If discrepancies were found among

the constituent groups ratings, decisions were made as to whether they were expected to occur. If not the goal area may not be the same in meaning for each of the groups.

4. The mean present and preferred ratings of importance of the four types of institutions were compared to investigate the validity of preferred importance ratings (see Peterson and Uhl 1977, p.78).

5. The goal area correlations between ratings of present and preferred importance were also examined. While some overlap were expected, very high correlations approaching the magnitude of the reliability coefficients indicated the two types of responses were providing the same information and therefore one was thought to be unnecessary and discarded from the instrument.

6. The results of factor analyses of the goal area intercorrelation provided another measure of construct validity.

7. An adaptation of Campbell and Fiske's convergent and discriminant validity procedures was employed to determine whether the IGI correlates highly with variables with which it should theoretically correlate and whether it does not correlate with variables from which it should differ.

8. Profiles comparing the responses of the constituent groups at specific institutions were examined.

9. A single institution's profile of its ratings of preferred importance was examined to determine whether it followed the expected pattern.

10. Profiles of preferred ratings of the four types of institutions were compared to determine whether the profiles followed the expected pattern.

Source: Peterson and Uhl, 1975.

APPENDIX D

PRIORITIES FOR THE DEVELOPMENT OF UPNG 1984-89

Priorities for the Development of UPNG 1984-1989

The following in broad outline, are suggested as priorities for the development of this University during the next three to five years.

1. To continue to improve the quality of university courses. There can be no ever-all increase in the number offered. All existing courses to be reviewed according to University criteria and, if they pass scrutiny, they should be further developed. For each approved course, there should be a statement of objectives detailed along with details of assessment.

2. To consolidate all diploma and degree programmes so that the courses offered by lecturers and departments are well co-ordinated and directed towards the attainment of academic and professional objectives of the programme. Inadequately establish programees such as that for the diploma in Industrial Relations and new programmes, e.g. the Diploma in Quantitative Methods should be firmly established.

3. To support the process of improvement of courses , there should be a programme for the production of textbooks where these do not already exist. Or there should be a formal mechanism through which texts should be suggested by lecturers and approved by the departments and faculties.

4. Preliminary Year should be phased out and the University should cooperate with the Government in improving the capacity of National High Schools. This may mean that some staff positions will have to be cut from our establishment. Such cuts may be avoided if we could persuade the Government to allow us to transfer them from PY studies to the improvement of Extension Studies programmes.

5. The Universities stated commitment to Extension Studies must be translated into substantial support. Academic Board should determine priorities for the conduct of external courses, then adequate funding and staffing must be arranged to cover the preparation of materials, marking of assignments, conduct of tutorials, etc.

6. The first year programme of the University should be carefully reviewed and specific measures taken to help students adjust to University life. A highly co-ordinated induction programme and foundation year are advocated . These should refer both to social and intellectual problems encountered by the students coming to theUniversity. The aim will be to reduce attrition.

7. The University's efforts to revise terms and conditions of service and to introduce a single line salary scale should be pressed to reach a final conclusion. The University should be clear about its employment philosophy and priorities for the next five to ten years. The importance of attracting and training more citizen staff should be clearly stated as should the importance of attracting high level expatriate staff in needed areas. The University should, in its attempts to get better staff, advertise in a more enterprising way and deal through the international agencies such as the Association of Commonwealth Universities and should press to establish links with universities who are prepared to second staff here. It is clear that a seconded staff who has a job to return to will be more likely to fit in with our Staff Development Programme.

8. Housing is an important matter in recruting and retention of staff and every effort should be made to encourage citizen staff to own their own homes. University residence should be reserved for key personnel, citizen staff during limited initial period of employment, and contract staff. After this defined initial period all citizen staff should be required to obtain a house for themselves and the University should assist them to do this in whatever way it can.

9. The University should continue to press for the transfer of agriculture teaching to Lae. At the same time it should press ahead with efforts to have the Teaching of Fisheries brought over here and to acquire necessary land and facilities to support this teaching.

10. The University must act in response to recommendations of the Policy Planning Group on Accountancy Education and to improve teaching of Accountancy/Commerce. Co-operation with PNG Univeristy of Technology must continue.

11. First efforts to establish residential colleges on campus so to improve study facilities and social life should be continued and a target date for opening of the first College should be determined.

12. As the library continues to fill up the main library building, it is clear that the Law Faculty and TMMC will have to find other space and we should press ahead with attempts to obtain funding - through internal and external sources for a new Law building. The Pacific Law Centre may be the means through which we attract aid funds for the new building.

13. The Natural Sciences Reserve Centre should be completed during the planning period, using NPEP or externally derived funds.

14. The possibility of obtaining aid funds for a School of Melanesian studies should be further investigated. This school would have to give a much needed boost to the morale of the Arts Faculty.

15. The area opposite the Library now used by Student Services and the Supermarket and the Fast Food Services is underutilized. Any further development should include plans to make better use of that space. To this end the possibility of establishing a commercial centre on campus which will house the Supermarket, the Fast Food Store, the Coffee Lounge,the Chemist Shop and the Bank is being investigated. Rental income would serve to repay the loan necessary to construct the building.

16. Success by individual academic staff in attracting funds and the logistic support for research, particularly Applied Research, is welcome. The University should attempt to improve its image and to extend its service within the nation. Too often the Government ignores the University and goes outside the country looking for expensive external consultants. If we are able to establish our credibility as a centre for research interests, we can use government requests for research as levers to obtain additional support.

17. Given the scarcity of resources and the likelyhood of attracting major funding for new programmes, it may be necessary to identify staff for limited periods who will be employed to run a particular diploma or degree programme for a limited period of time. A certain out-put target should be aimed for and when it is achieved that programme should be shut down and the resources transferred to another one . It is dangerous to consider that, once started a degree or diploma programme should continue and "in finitum".

18. Professor Salter-Duke has written that the computer age has reached PNG and we should not ignore it. Recent moves by the computer manager and the Computer Uses Committee to upgrade our computer facilities has been very timely. We should press on in an attempt to obtain the kind of facilities that will help us to improve our services within and without the University.

19. Greater effort should be made to develop post- graduate studies within the nation and to enrol suitable post -graduate students for degrees at the University of PNG. The joint supervision of degrees with some component offered by overseas universities and some by UPNG should be investigated. The University should continue to press to obtain more scholarships for people to study overseas but should be more careful in the selection and briefing of students so as to make sure that the right programme and the right student are matched up.

20. The status of Goroka Teachers' College and its relation to the University as a whole and more particularly to the Faculty of Education should be given high priority. The end result should be a structure or arrangement that will improve the quality of secondary teacher education. In addition to administrative and / or organizational changes serious attention will have to be given to increasing academic and support staff establishments. EFTS and other statistics have verified the need. A third contribution to quality teacher education will be serious efforts in obtaining government or outside funding for facilities in Design and Technology and Agriculture and the development of degree programmes in Home Economics and Community Nutrition and Design and Technology. The World Health Organization should be considered as a possible outside financial source for the Home Economics and Community Nutrition degree proposal.

21. The aims of the library are as follows:

(1) Further development of the University of PNG Library service to achieve the goals of the University and to enhance its value as a resource.

(2)The completion of the computerization of all the facilities in the library system which will allow the creation of a national information data base. This will strive to be comprehensive for all New Guinea topics and will include all printed material, archives, photographs, maps and audio visual materials. It will also hopefully include the PALIN materials.

(3) The national information data base will be accessible to other institutions within the country through computer links which will need to develop with the National Library, ADCOL Library, IASER, The Justice Department and major institutions in the provinces such as PNGUT in Lae and Goroka Teachers College Library.

To achieve the first three targets an enhancement of the UPNG computing resources will be needed and also guarantee that the purchasing power of the book budget are not eroded by inflation or currency changes.

(4) An advanced library management programme has been approved by the staff development Committee. This will be implemented over the planning period allowing the completion of a successful localization programme by the end of the decade.

Source: The University of Papua New Guinea Medium Term Plan 1984-1989 (1985, pp.viii-xii)

APPENDIX E

Interview Guideline for the Research on University Goals in Papua New Guinea.

Interview Guideline for the Research on University Goals in Papua New Guinea.

Name:________________________**Position/Status:** 1______________________
(in the university)
2. _____________________
(outside the university)

Address:__________________**Tel.no:(Office)**__________**(Res.)**________________

University most involved with (circle one): 1. UPNG 2. PNGUT

Introduction

Researchers and educationists in the field of higher education have identified twenty goal areas which are believed to be common to many colleges and universities throughout the world. These are listed below with a brief explanation of what they would generally mean. After a brief explanation of their meanings, I will ask you to

A. Rank order the twenty goal areas by Q sort and respond to the top five goal areas using the following questions as your guide.

1. Why are they important in PNG at this time?
2. What might be done to enhance these goals?
3. What problems might lie on the way of goal achievement?

B. Suggest any other goal areas which you think are important for universities in PNG but not included on the list. Why are they important?

C. Are there any goals presently being pursued by the universities in Papua New Guinea which should be de-emphasized? Why?

D. Any other comments about:

1. the importance of universities in Papua New Guinea.
2. the number of universities necessary for Papua New Guinea.
3. establishment of private universities in Papua New Guinea.
4. coordination of universities in Papua New Guinea.
5. current and future locations of universities in Papua New Guinea.
6. ways of funding universities in Papua New Guinea.
7. attracting, training and maintaining highly qualified staff in universities in Papua New Guinea
8. other aspects of universities.

List of Goal Areas

1. **Academic Development-** This goal has to do with acquisition of general and specialized knowledge, preparation of students for advanced scholarly study, and maintenance of high intellectual standards on campus.

2. **Intellectual Orientation-** This goal area relates to an attitude about learning and intellectual work. It means familiarity with research and problem-solving methods, the ability to synthesize knowledge from many sources, the capacity for self-directed learning and a commitment to lifelong learning.

3. **Individual Personal Development-** This goal area means identification by students of personal goals and development of means for achieving them, enhancement of sense of self -worth and self- confidence.

4. **Humanism/Altruism-** This goal area reflects a respect for diverse cultures, commitment to working for world peace, consciousness of the important moral issues of our times, and concern about the welfare of man generally.

5. **Cultural/ Aesthetic Awareness-** This goal area entails a heightened appreciation of a variety of art forms, required study in the humanities or arts, exposure to forms of international art and encouragement of active participation in artistic activities.

6. **Traditional Religiousness-** This goal area is intended to mean a religiousness that is orthodox, doctrinal, usually sectarian and often fundamental- in short traditional rather than "secular" or "modern".

7. **Vocational Preparation-** This goal area means offering specific occupational curriculum (as in accounting or nursing), programs geared to emerging career fields, opportunities for retraining or upgrading skills and assistance to students in career planning.

8. **Advanced Training-** This goal can be most readily understood as the availability of post graduate education. It means developing and maintaining a strong comprehensive graduate school, providing programs in the professions, and conducting advanced studies in specialized problem areas.

9. **Research-** This goal involves doing contract studies for external agencies, conducting basic research in the natural and social sciences, seeking generally to extend the frontiers of knowledge through scientific research.

10. **Meeting Local Needs-** This goal area is defined as providing for continuing education for adults, serving as cultural center for the community, providing trained manpower for local employers and facilitating student involvement in community service activities.

11. **Public Service-** This goal area means working with governmental agencies in social and environmental policy formation, committing institutional resources to the solution of major social and environmental problems, training people from disadvantaged communities and generally being responsive to regional and national priorities in planning educational programs.

12. **Social Egalitarian-** This goal area has to do with open admission and meaningful education for all admitted, providing educational experiences relevant to evolving interests of minority groups and women, and offering remedial work in basic skills

13. Social Criticism/ Activism- this goal area means providing criticisms of prevailing values, offering ideas for changing social institutions judged to be defective, helping students learn about how to bring about change in PNG society and being engaged as an institution, in working for basic changes in PNG society.

14. Freedom- This goal area is defined as protecting the right of academic staff to present controversial ideas in the classroom, not preventing students from hearing controversial points of view, placing no restriction on off campus political activities by members of staff and students and ensuring members of staff and students the freedom to choose their own lifestyles.

15. Democratic Governance- This goal area means decentralizing decision making arrangements by which students, members of staff, administrators and governing board members can all be significantly involved in campus governance that is genuinely responsive to the concerns of everyone at the institution.

16. Community- This goal area is defined as maintaining a climate in which there is staff commitment to the general welfare of the institution, open and candid communication, open and amicable airing of differences and mutual trust and respect among students, staff and administrators.

17. Intellectual/Aesthetic Environment- This goal area means a rich program of cultural events, a campus that facilitates students' free-time involvement in intellectual and cultural activities, an environment in which students and staff can easily interact informally and a reputation as an intellectually exciting campus.

18. Innovation- This goal area is defined as a climate in which continuous innovation is an accepted way of life; it means established procedures for readily initiating curricular or instructional innovations; and more specifically it means experimentation with new approaches to individual learning.

19. Off Campus Learning- This goal area includes time away from campus in travel--work study-- e.g., study on several campuses during undergraduate programs, awarding degrees for supervised off-campus study, awarding degrees entirely on the basis of performance on an examination.

20. Accountability/Efficiency. This goal area is defined to include use of cost criteria in deciding among program alternatives, concern for program efficiency, accountability to funding sources for program effectiveness, regular submission of evidence that the institution is achieving its stated goals.

APPENDIX F

SAMPLES OF RELATED CORRESPONDENCE

University of Alberta
Department of Educational Administration
7-104 Education Building North
Edmonton, Alberta,
Canada, T6G 2G5

6th June 1987
The Vice Chancellor
Papua New Guinea University of Technology
Private Mail Bag
Lae
Papua New Guinea

Dear Vice Chancellor

Subject: Permission to Conduct Research at Your University

You may be aware that I am a national staff of the University of Papua New Guinea Before taking my study leave, I worked as a Teaching Fellow, Lecturer, Deputy Principal and Principal at Goroka Teachers' College (1977-85). I am studying for a Ph.d in Educational Administration at the University of Alberta in Canada.

My purpose for writing to your office is to request your permission to conduct research at this university. Briefly the purpose of the research is to identify the goals of university education in Papua New Guinea as perceived by members of the faculty and administrators including university council members, and goals which are documented in official government and university documents. This involves a review of official policy documents such as the Acts, Statutes, handbooks and other related records.

A questionnaire based on the Institutional Goals Inventory (IGI) will be adapted and administered to all administrators and a sample of academic staff members in two institutions --UPNG and PNGUT. The questionnaire consists of 100 goal statements for colleges and universities. Respondents will be requested to rate on a five point scale, how important a particular goal statement is, and how important it should be, for the university. The results will be analyzed and the various views will be compared to establish some goal insights and the degree of agreement or disagreement, about what the goals of universities in Papua New Guinea. I believe this study is an important one for the institutions participating in the research, especially at this point in time when the government is pressing the universities to re-examine their goals and priorities.

I trust you will be able to support this request .

Yours Sincerely

John Mark Solon

20th August 1987

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Dear Colleague

You may be aware that I am a national staff of the University of Papua New Guinea Before taking my study leave, I worked as a Teaching Fellow, Lecturer, Deputy Principal and Principal at Goroka Teachers' College from 1975-85. I am studying toward a Ph.d degree in Educational Administration at the University of Alberta in Canada. The purpose for writing to you is to request you to fill out the attached questionnaire which is part of my doctoral research

As you are aware many changes in educational, social, and economic conditions have taken place in Papua New Guinea that have made it necessary for the colleges and universities to reach clear and new understanding about their goals. During the late 1960s there were demands placed on our colleges and universities to serve certain goals and national interests. Now in the 1980s, a widespread financial crisis is making it necessary for colleges and universities to re-examine their objectives and establish their priorities to which limited resources may be directed.

Briefly the purpose of this research is to identify the goals of university education in Papua New Guinea as (1) perceived by members of the academic staff and administrators including university council members, (2) expressed in government, university and private documents.

This questionnaire, is based on the Institutional Goals Inventory (IGI) developed in North America, but it has been adapted for use in Papua New Guinea. It is used to help higher education institutions to delineate their goals and establish priorities among them. It consists of about 100 goal statements for colleges and universities. The instrument does not tell colleges what to do in order to reach their goals. Instead it provides a way by which many individuals and constituent groups can contribute their ideas as to what our universities' goals are and what they should be in the future. The focus of interest is upon the universities of Papua New Guinea. You are asked to respond to the questions as they pertain to your university.

Your response to the questionnaire will be completely anonymous. Results will be summarized only for groups-- i.e., members of the academic staff, administrators and members of the Governing Councils. A brief report of the findings will be submitted to the universities involved in the study. In no instance will responses of individuals be reported.

It may be of interest to you to know that the research and the attached questionnaire have the support of the Vice Chancellors for distribution to academic staff and administrators in this university.

Your cooperation is required to respond to all the items in this questionnaire within the next seven days. When you have done so please return the questionnaire to me at the following address:

(1). For UPNG administrators and Staff : C/o The Staff Development Officer, University of Papua New Guinea, P.O. Box 320, University Post Office, Waigani.

(2). For PNGUT administrators and staff: C/o The Vice Chancellor's Office, The Papua New Guinea University of Technology, Private Mail Bag, Lae.

Thank you for your much needed support.

Yours sincerely,

John Mark Solon.